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American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., SEPTEMBER 9, 1897.

NO. I.

A WORD OF WARNING.

BY E. H. BABCOCK, D.D.S., M.D.,
Brooklyn, N. Y.

In 1867-68, at King's College, London, Sir Joseph Lister introduced antiseptic surgery. He used carbolic acid solutions for washing the hands of the operator, for saturating all bandages, and as a spray about the site of the operation, and over the hands of the operator and his assistants. As a result the tissues became saturated with that drug, the operators were great sufferers, while the patients developed all the symptoms of carbolic acid poisoning.

A few years ago, in a public speech, this same great Lister announced to his hearers his regret that he had ever favored the method of treatment that bears his name. Lister's method was extreme. It set men to thinking and experimenting. It taught that cleanliness was necessary for the success of an operation.

When this light began to dawn upon the minds of the general surgeon, what a change came about in the operating-rooms! What was once the dirtiest room in the hospital was transformed into the cleanest. The operating-gown, dark with age and stained with the blood of an hundred victims, gave way to the immaculate white dress, fresh for each operation. The floors, covered with sawdust and filth, glistened like snow under the application of water and brush. And to-day the surgeon enters any cavity of the human body with less trepidation than did the sur-

geon of old approach the amputation of a finger.

In dental surgery the history of the use of amalgam may serve to illustrate the thought I am desirous of making clear. Its advent was hailed with joy; everybody used it. Then there came a reaction, and no one would admit using it, or that it had any intrinsic worth. To-day, by its intelligent use the dental surgeon is able to save many a poor tooth that is not "good enough for gold," and would formerly have been consigned to the loving embrace of the forceps.

"I care not what may be the condition of the root; only give me such and such antiseptic and I will fill that root-canal and all will be well." This seems to be the prevailing thought among dentists at the present day, and if it is allowed to go on without remonstrance, it will work great injury to more than one dentist—to more than one patient.

Dentists are thankful for the powerful antiseptics that synthetical chemistry is placing within their grasp. The antiseptics act at once; they overcome putrefactive changes. But does their power never wane?

A chemical battery will develop an electric current. It is active for a time; then it stops—all chemical action has ceased.

These antiseptic agents have a certain amount of stored-up energy. There must be a limit to it; they must in time lose their power.

In teeth with devitalized pulps the organic portions will undergo degenerating chemical

changes—putrefaction. Antiseptics have the power of combating that putrefactive action. The less the organic matter to putrefy the longer will a given quantity of an antiseptic continue to prevent sepsis. Consequently, the more thoroughly all root-canals and pulp chambers are cleansed of organic matter, the greater will be the freedom from trouble after root filling.

To make a long story short, what should be taught in every dental college, preached in every dental meeting, and practiced at every operation for the filling of root-canals is "mechanical antiseptis."

Thorough mechanical cleansing of root-canals should always precede the use of any antiseptic.

ORAL DISINFECTION IN HOSPITAL PRACTICE.

BY G. V. I. BROWN, D.D.S., M.D.,
Duluth, Minn.

Disinfection of the oral secretions is rapidly progressing in the estimate of its importance by those who care for the sick. To one who has given much thought to the subject it is a matter of surprise that its consideration should have so long failed to keep pace with other aseptic advances. To physicians, surgeons and nurses its discussion may be best applied in two principal divisions.

Firstly. The care of their own mouths.

Secondly. The treatment of patients.

In many hospitals I have seen nurses scrupulously clean in every particular concerning dress and care of hands; trained perfectly in all that pertains to the duties of their office, save one—their mouths were uncared for. Evidences of carious teeth were apparent; diseased roots were discharging their pus-laden products through fistulous openings, and frequently they were found to be wearing dentures for the support of artificial teeth, made commonly of rubber, the upper surfaces of which were

simply foul bacterial breeding-places, and who can doubt the fact that such conditions were a menace to every wound they may have been called upon to dress, to each operation at which they may have happened to assist, even to those at whose bedside they ministered.

It is true that there are practitioners who make light of the possibility of infection being thus communicated, but it is also true that there are individuals still remaining who scoff at many of the aseptic precautions of modern surgical technique, yet no conscientious surgeon would for this reason be warranted in omitting even the smallest of these precautions against the possibility of danger.

It has been repeatedly proven by Miller, Koch, Black, Turck, and other investigators that the buccal secretions are common carriers of both pathogenic and non-pathogenic germs, for with heat, moisture, variety of culture media and every accessory of a most perfect incubator, it is not strange that the mouths of even healthful cleanly persons should be filled with bacteria of every nature, and when coated with the neglected concretions of mucus, with products of fermentation, the result of collected particles of food, from carious teeth, or discharges of pus about the necks of teeth, or from the abscesses of diseased roots, how much worse must their condition be?

It may seem a slight exaggeration to say, as has been said by good authority, that the wearer of a neglected ill fitting rubber denture may, "with the friendliest intention in the world, bid you good morning and at the same time blow into your lungs the seeds of future disease," yet this is perhaps quite as near the truth as many other theories that account for the deadly record of tuberculosis.

At least these facts ought to warrant thorough cleansing of the teeth with a brush and the use of some disinfectant wash, and for those who wear artificial dentures, thor-

ough cleansing of all the surfaces by brushing with antiseptic solutions that will not injure the materials of which they are composed.

As to mouths of patients, all that has been said will apply with equal or greater force. In typhoid and other long-continued fevers, gastric disturbances, and all affections of the digestive tract, it becomes a matter of first importance.

In fractures of the maxillæ the most common difficulties in after-treatment come from the suppuration due to injury of tooth pulps by traumatism, and though the discharges may ultimately necessitate the removal or treatment of teeth so affected, much can be done to offset the harmful influence by constant cleansing with some antiseptic preparation.

As for the care of cases of hare-lip, cleft-palate, or other operations upon tissues adjacent to the oral cavity, constant and continued disinfection is of course an obvious necessity.

Its advantage, too, in treatment of appendicitis as a prophylactic, where without operation it has a tendency to recur, and after operation of any sort upon the bowels, cannot be overestimated, since it is clearly proven that germs from the mouth can and do quite commonly, under favorable circumstances, pass entirely through the alimentary canal without loss of their vitality.

I have seen surgeons so careful that in anticipation of a laparotomy the following day, the finger-nails would be manicured the night before, and at the operation every possible cleansing solution used upon the hands as well as the wound surface, the head bandaged with a towel saturated with an antiseptic, yet no particular attention given to the mouth covered by a heavy mustache upon which its secretions might dry in order to be more conveniently blown into the wound at some favorable opportunity, and though this danger might be comparatively insignificant upon surfaces that

will admit of constant flushing with bi-chloride, creolin, or other germicide, in operations within the peritoneal cavity, where hot water, or at most a solution of pyrozone would be admissible, such neglect might readily account for many of the otherwise unaccountable attacks of peritonitis from time to time recorded.

In the literature pertaining to surgical methods the subject of care of the mouths of both patient and operator is commonly conspicuous by its absence, but the *Journal of the American Medical Association* of August 7th quoting from an article by Professor J. Mikulicz, published in the *Deutsche Med. Woch.*, in which he states that the results of aseptic are scarcely an improvement over antiseptis. In referring to safeguards he suggests as important: "Mikulicz has also found the germs disseminated in the air from the mouth in speaking or coughing, floating on tiny bubbles of moisture. As moist germs are much more dangerous than dry ones, to reduce this evil to a minimum he limits the number of persons present at an 'asepsis operation' to the smallest number possible, not even admitting more than six to ten students at most, and all present wear a sterilized piece of mull over their mouths, fastened to their sterilized caps; it can also inclose the beard, if there is one. They soon learn to breathe through it as comfortably as a lady through her veil. Gestures take the place of words as much as possible. Flugge, the bacteriologist, considers that a surgeon with a cough or tendency to sneeze has no right to attempt an 'asepsis operation.'"

It would seem to be unnecessary to rehearse in detail the experiments of many bacteriological laboratories that have contributed to a knowledge of the extent and nature of mouth bacteria, or to figure out the exact percentage of cases in which the neglect of disinfection of the mouths of surgeons, nurses or patients might prove injurious; a simple emphasis of the fact, as

before stated, that all mouths contain a variety of bacteria, something over one million that could be cultivated having been found in an uncleanly mouth, among which were over twenty different kinds, eight of which were able to pass safely into the stomach, and twelve were again found in the feces, ought to be sufficient in these days of intelligent precaution to warrant iron-clad rules of observance from all concerned.

To disinfect the oral cavity requires care in brushing, and if practicable, the passing of silk between the teeth, but always the use of a germicide sufficiently powerful to overcome the unavoidable dilution by the secretions of the mouth without any active property that might affect injuriously the mucous membrane or the teeth, and even though rapid in its action, should be held in the mouth for two or three minutes to completely sterilize particles of food lodged between the teeth.

The more agreeable in flavor such a preparation can be, the more acceptable you will find it, both to you and your patients, and as constant use is necessary, this will be found to be no inconsiderate matter.

At a country charitable fair, Dr. Holmes was entreated to furnish a letter for the post-office. He took a sheet of paper, and between its folds placed a \$1 bank note; turning to the first page, he wrote the following:

Dear lady, whosoe'er thou art,

Turn this poor page with trembling care;

But hush, oh hush thy beating heart,

The one thou lovest will be there!

The page turned disclosed the attractive greenback. On the third page, opposite the bank-note:

Fair lady, lift thine eyes and tell

If this is not a truthful letter;

This is the one thou lovest well,

And naught (O) would make thee love it better!

A METHOD OF CONSTRUCTING VULCANITE PLATES.

BY T. C. WEST, D.D.S.,
Natchez, Miss.

First of all get an accurate impression in plaster or Teague's impression compound (I use the latter entirely for impressions). Then proceed in the usual way to make the best possible plaster cast, being careful that it is smooth, having no holes caused by air bubbles; if the model is pitted with small holes, dip it in water and rub dry plaster on it, continuing this until they are filled. After the cast is perfectly dry, coat surface with any good rubber cement. Amber cement, prepared by the Chase Combination Co., is excellent. After allowing the cement to stand a few minutes, giving chloroform time to evaporate, take a piece of vulcanite rubber, either black or red, of sufficient size to cover model, and with thumb and finger press it over the surface until it is entirely covered. It will adhere very closely on account of the cement; trim up the edges with scissors, and then press them down; if they do not stick, raise them slightly and add a small quantity of cement; allow evaporation to take place, then again press them down and there will be no trouble. By stretching vulcanite you can make plate as thin as you like, and the rugæ can be perfectly represented. Now take cast with vulcanite-covered face and drop it into any ordinary flask, cover with plaster and vulcanize, but only about one half or two thirds the usual time. This gives a vulcanite base-plate, which, when trimmed to accommodate the muscles, will be found to fit the mouth better than one vulcanized under screw pressure. This base plate is now used for taking the occlusion or bite, by softening a roll of wax and pressing around the alveolar ridge portion, and will secure a much more correct bite than with wax base, as plate fits mouth perfectly, thus allowing patient more freedom with jaws.

After getting correct bite, slightly oil the palatal portion of plate and fill with plaster (if deep under cuts use modeling composition), and mount on articulator in usual way; remove bite wax and cleanse surface perfectly, using chloroform and alcohol, after which give the ridge portion a coat of Amber cement and cover with a strip of red or black rubber, not allowing it to come as high as rim of plate. Now set up the teeth, which is done by warming them; plain teeth of course, and pressing each into the rubber, to which they will stick; rubber will bulge over necks forming a most natural gum. After the teeth are satisfactorily arranged, soften a piece of gutta-percha in warm water and press around the pins to steady them, and the plate is ready to try in mouth. If the teeth need any change in arrangement, it can be done very nicely by heating and replacing while plate is in mouth. Quite an advantage in arranging teeth, as the plate fits and is comfortable. After rearranging the teeth in the mouth, replace them on the model in articulator, soften modeling composition, and fill the vault, pressing well up and slightly over teeth; cool with ice water and remove the teeth separately. If the ridge is very large and gum is to be thin, remove red or black rubber into which teeth have been set and replace with a strip of pink, using the Amber cement and allowing pink to come up to edge of rim, and just below pin holes in gutta-percha. If ridge is small stretch pink strip over the piece teeth were originally set in, pressing down into depression made by butts of teeth; warm each tooth and replace it in its position, using impression of same in modeling composition as a guide; after they are all in place in the pink rubber, trim away the composition exposing the teeth very nearly to pins, remove from the articulator. If modeling composition has been used for the model, run plaster in the plate; if plaster was used,

same model will answer; place model with plate and modeling composition in the vault, in shallow half of flask run plaster, well-mixed, around outside of plate, etc., till it covers teeth and touches composition. In fact, cover everything but the composition. Allow plaster to harden well, soften composition in hot water, remove gutta-percha, also apply cement and with warm spatula work in rubber, red or black, around pins just where it is needed; smooth off with chloroform, add the other half of the flask, pour in plaster till full, using no separating fluid, put on jacket to be sure the flask does not open by expansion of rubber when hard. Vulcanize the usual length of time, and finish in any way desired. This gives a very lifelike gum tissue, and if finished by rubbing with bibulous paper wet with chloroform and dipped in pumice finely powdered, bleached in alcohol in bright sunlight, then rubbed vigorously with chamois skin, very beautiful results can be obtained.

If you do not care to use this method entirely, you can make base-plate as described, wax up teeth as usual, but instead of carving the gums remove the wax from the gum portion, and take a semicircular piece of rubber dam, cut holes to receive the teeth, as for the mouth, stretch it over the teeth, fill in the gum portion with Melott's mouldine, bring rubber up over the same as far as the rim goes, and by a little manipulation through rubber, adding mouldine where needed, you will have a very naturally formed gum. You can flask with rubber on, and remove with mouldine when flask is separated, or you can remove rubber before flasking, stipple mouldine with a cloth pressed over it wherever needed, coat with liquid silix, and flask as usual. The feature in this method is, you can build up gum just where you want, and have no wax to contend with.

[This has been styled, and justly so, West's method.—ED. AM. DENT. WEEKLY.]

THE PACIFIC COAST.

BY L. VAN ORDEN, M.D., D.D.S.,
San Francisco, Cal.

The Pacific coast sends greeting and well wishes to the new AMERICAN DENTAL WEEKLY, and is glad to have a voice in its initial number. A dental weekly is a happy idea, and will no doubt be newswy, helpful, and welcome in all parts of our dental world. It is inspiring to think that this vast country of ours leads the world in the quality and quantity of dental operations, with cheering prospects of still further advancement, better dental schools, graduates with higher ideals, and more numerous and more active dental organizations.

San Francisco has just been the scene of the "second dental congress which has been held on the coast." The first one, known as the "Midwinter Fair Congress," was convened in 1894, at a time of much financial distress; but it brought into fellowship several hundred dentists from widely distant points (our California coast-line alone being one thousand miles long), many of whom had never been present at a dental gathering before. It was novel and somewhat pathetic to old association men to note the eager and patient air in the faces of these novices. Some of the latter were among our best contributors, and all were thrice welcome. Year by year, since the San Francisco Dental Association was organized in 1869, there has been a hope cherished that some eastern body, like the American Dental Association, would lend us its helpful presence. These have been vain hopes, and perhaps unreasonable ones. Now the determination to make the congress annual in some part of the Pacific coast finds us suddenly and delightedly "on our own feet," both of them, with a healthful sense of a responsibility of our own. Next meeting at Salt Lake City in July or August, 1898.

At the congress just closed Washington, Utah, Colorado, Nevada, Montana, Arizona,

were all represented, while Oregon naturally ranked next to California in numbers and furnished an able president, Dr S. J. Barber. One of the most notable figures was Dr. J. M. Whitney, the vice-president, who represented Hawaii. He is tall, earnest, active, a pleasing speaker, and an earnest thinker and investigator. His twenty-nine years of residence in Honolulu has produced results of great value to dentistry, and his several papers on studies of Hawaiian skulls and teeth has given his name a foremost place in our profession. He says that the invisible motto on his office wall is "Change Conditions" in the mouths that are placed in his care. A volume of advice in that. The writer would beg to add another: "Improve the Occlusion," especially where teeth have migrated, or are tipped or rotated as a result of extraction. Easing the occlusion will sometimes relieve apparently unexplained irritation of teeth.

One of the most fully discussed papers was that by Dr. Whitney on "The Value of Gold as a Material for Filling Teeth." It was a valuable contribution, and delightfully free from the usually partizan narrowness. The writer, in opening the discussion, granted the esthetic value of gold, especially in the superior bicuspid and first molars, and the necessity for constant practice on the part of young practitioners to secure speedy and efficient operations with this fine material; but he contended that the awakening interest in the protection of the interproximal space, and the noticeable buccal and lingual recurrence of decay at the margins of both amalgam and gold fillings which had not been made self-cleaning either by wedging or free cutting back from adjoining surfaces, with well shaped and full contour replacement, has placed this old question in a new light for examination. Enough attention has not been given to the buccal and lingual embrasures, nor have the full possibilities of contour operations been realized in the average of dental practice.

Dr. L. P. Leonard, of Waseca, Minn., read a paper entitled "Preparation and Filling of Occluso-approximal Cavities." The natural interest was enhanced by drawings, casts and instruments, and by clinic. Instead of forming the occlusal anchorage steps with burs, the writer frequently cuts a dovetail with a rubber and corundum disk, carried preferably in a right-angled hand piece. Sometimes a fissure of decay is utilized and widened, and sometimes the sound tissue is cut into with a minimum loss of strength.

Then there were papers on—

"Bleaching Devitalized Teeth with Pyrozone."

"Stomatological Bacteria the Cause of Decay in the Teeth; Immunity, and How Obtained."

"Evolution of the Gold Crown."

"Arresting Decay of the Teeth."

"Replantation."

Also a multitude of clinics, which went to evidence the fact that the filling and preservation of the natural teeth by dentists is not yet a "back number" in these "green solid" days of stomatology.

"The Necessity of General Education in Dental Prophylaxis."

"The Influence of Science on Modern Civilization."

"State Dental Laws, Efficient, Deficient."

"The Disinfection of Dental Tools and Instruments."

"Cleft Palate."

Two good papers on "Antral Disease."

These spoke well for a wide range of study on the part of the members.

Two evening sessions were made notable by illustrated papers. Prof. C. L. Goddard, our next president, presented "The Canine Tooth in Comparative Anatomy," using the fine collection of lantern slides and skulls and the stereopticon apparatus from the dental department of the University of California. Dr. F. K. Ledyard presented "Ancient Dentistry," with lantern-slide illustrations of the methods of adjusting teeth and making plates during the last century.

The "wind-up" was by scenic railway up the steep slope of Mount Tamalpais, nearly two thousand feet high. From its summit may be obtained a clear view of the Farallones Islands, twenty-three miles at sea, and a panoramic view of the Golden Gate and harbor. "A beautiful picture, made up of the surrounding country, studded with wooded cañons, cities and villages, and clear stretches of blue water, presented itself, while miles below the roaring ocean broke upon the rocky and dangerous coast." Wit, music, and a genuine collation well-rounded out the play day time.

Sulphur for Mounting Carborundum Wheels.

Powdered sulphur, such as is generally used for fixing tube teeth in position, says *Ash's Quarterly*, is superior to shellac for mounting carborundum wheels on lathe chucks.

To mount a wheel, heat it and the chuck over a Bunsen flame; put sulphur in the hole of the wheel, fit the chuck on the lathe head, true the wheel while the chuck is warm, secure the wheel in position by tightening the nut against it, hasten the setting of the sulphur by pouring cold water over the wheel and chuck, and the result will be perfect fixture of the wheel on the chuck.

Third Set of Teeth.

Cases of third dentition have always been regarded as myths. The laity often report such cases, however.

Dr. S. B. Palmer, of Syracuse, N. Y., reports, in the *International Dental Journal* for August, a well authenticated case. The dental world knows Dr. Palmer, and can feel assured of one case of third dentition.

Send your subscription at once and begin with the beginning of the AMERICAN DENTAL WEEKLY.

NITRATE OF SILVER IN ALCOHOL.

BY DR. T. F. DRISCOLL,
Corsicana, Texas.

In the following I will give to the profession my practical experience with the above solution, which for a number of years I have used successfully for various purposes.

Dissolve 5 to 6 grains of nitrate of silver in $\frac{1}{4}$ to $\frac{1}{2}$ ounce of absolute alcohol, keeping it well stopped and away from the light. A very helpful remedy it is in certain cases of diseased gums, as gingivitis, pyorrhea, alveolaris. Apply it with shreds of cotton on an old broach or properly shaped orange wood, carrying it to all parts. As a standby I apply it to small cavities at necks of teeth which are especially sensitive to touch. Dry same well, and after use, follow with a solution of common salt. In the treatment of temporary teeth, which are either deemed not best to fill, or in which the tender age of the patient makes any other application impossible, its use is to be recommended.

Sometimes the remedy is very useful in devitalizing stubborn nerves. On an old broach, with some shreds of cotton, I push it slowly toward the apex of the canal, and usually I am able to remove the pulp painlessly in a few minutes.

Having, in short, indicated the preparation and application of this valuable medicine, I would at the same time advise judgment. Being a powerful caustic, nitrate of silver may cause much pain and soreness in an unskillful hand.

Polishing Plates.

Mr. W. H. Wilshire, in *Ash's Quarterly*, says:

To prevent pumice flying on one's dress while polishing, mix some soap in water until a foam is produced; then add the pumice to it, and dab the mixture on the denture which is being polished with a soft brush.

BLOWPIPE FOR WAXING CASES.

BY DR. J. A. ROBINSON,
Morrisville, Vt.

A convenient and efficient blowpipe for waxing cases is made, by using the nozzle of a chip blower and the mouthpiece of a tobacco pipe, connecting the two with a piece of rubber tubing ten inches long.

The Old and the New.

There were some at Old Point Comfort, on both sides, whose eyes must have moistened with tears as the articles of agreement for the union of the American and Southern Associations were signed. Those who have stood by their respective organizations from their beginning were almost to a man in favor of a union, believing the interest of the profession demanded it. They were willing to lay down a fond attachment for a stern act of duty. Some of them can hardly hope to attend many more meetings, but, like the patriarchs of old, blessed this grandchild as it were, and bade it God speed. They returned home with a sad feeling, and yet with a feeling that for the present and coming generations they had acted wisely. True, noble men they are. As they shall pass on through the years that lead to their eternal home, they will be comforted by the thought that they acted for the good of the cause.

The young men, who did not feel the separation as did the older ones, but who now compose the rank and file of the profession, will stand nobly forward and carry on the grand work so magnanimously inaugurated at Fortress Monroe.

Cleaning Teeth.

Mix the pumice with alcohol for cleaning teeth. It will not spatter, and the alcohol aids in removing the stains from the teeth.

THE
American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

EDITOR:

B. H. CATCHING, D.D.S.

FRED. BROSIUS, D.D.S., Editor of the German and French.

Subscription \$2.00 per year; \$1.00 for six months—Including Canada and Mexico; other countries \$3.00 per year.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited. The editor is not responsible for the opinions of contributors. Advertising rates sent on request.

Atlanta, September 9, 1897.

THE LAUNCHING.

When a new journalistic enterprise is launched, a few remarks are generally expected from the editor. While we feel a little elated over the fact that we are launching the only weekly dental journal, yet the responsibility of the occasion is a restraint upon our enthusiasm. There is, however, a degree of satisfaction in the feeling that we are giving to the profession that which it has been wishing and waiting for—a more rapid means of communication, and of getting the news. This may well be termed the electrical age, and with it comes the desire to move more rapidly. Professional advancement in all other lines is commensurate in this age of progress, and with a more rapid means of communication, ideas will develop more quickly into realities. We make no rash promises in outlining the course this journal will pursue. It is enough to say, that in conjunction with our older and abler contemporaries, our efforts will be to move professionally forward. We do not purpose to set the world on fire, but we will do our best to add a spark to the flame that is already ablaze for the greater en-

lightenment of the age. As a means to this end, we lay the pages of the AMERICAN DENTAL WEEKLY open to the professional public, and extend an invitation to take possession.

When we stepped down from the journalistic tripod seven years ago, not to retire from editorial work however, as we then launched a new enterprise, we parted with a noble company of editors. Since that time changes have occurred; some have gone to other realms, and some new ones have come upon the journalistic stage. To one and all we come again with greeting, and to work hand in hand for the further uplifting of our calling.

Our Duty.

The forming of the National Association was a wise procedure. The time in the history of dentistry in this country had arrived for unification. With separate organizations, the same progress could not be made as with one grand body. Great results may be expected from this union of the two associations. The profession, even from the remotest sections, will be quickened into new life. New blood will be thrown into the veins, which will greatly revivify the lagging interest so manifest for several years past. It is the duty of every wide-awake dentist (and why are not all wide awake?) to come forth and show his appreciation of his calling by going actively to work for a solid forward movement of the whole column.

This is no time for quibbling over minor details; real differences of opinion can be arranged as the general and more important work advances.

Contributions to the pages of the AMERICAN DENTAL WEEKLY are always in order. The regular order of business will be suspended at any time to receive a good contribution.

A Notable Marriage.

1869, in the city of Atlanta, marked the birth of a fair and precocious maiden. Distinguished men were present at the event to give her a name, swear allegiance and proffer support. Born under such favorable auspices, she naturally grew into a bright, well-rounded young womanhood, displaying virtues of such exquisite charm as to render her the toast among lovers of science and art.

And it came to pass (as it usually does) that a highly cultivated and attractive fellow, being apprised of the many accomplishments of this fair Southern queen, sought her hand in marriage. While some of her subjects favored the alliance, there were a few who opposed it—not because of reasons affecting the personality of the suitor, but rather from apprehension that in a union of two such distinguished personages the personality and traditions of the queen would be lost to the present generation and to posterity.

After a little persuasion and kind entreaty, however, the minority yielded, and mutual friends of the high contracting parties were commissioned to draw up the marriage contract. The preliminaries being arranged to the satisfaction of all concerned, on August 5, 1897, at Old Point Comfort, Va., in the presence of a brilliant assemblage, the nuptials of the Southern Dental and the American Dental associations were celebrated with considerable éclat.

If "in union there is strength," the friends of this alliance will be greatly disappointed should the sequel prove the falsity of the aphorism. But with such wise promoters of the scheme at the helm, every true and loyal subject will measure up to his full duty, thereby insuring a consummation far exceeding the most sanguine hopes and prophecies of twenty-five thousand men.

J. A. CHAPPLE, D.D.S.

Atlanta, Ga.

Dr. Evans, of Paris, Visits His Native Country to Inter the Remains of His Wife.

We clip the following from the *Atlanta Constitution*:

NEW YORK, August 29.—Dr. Thomas W. Evans, the famous American dentist, who for the past forty years has been the dental operator in Paris for most of the crown heads of Europe and many celebrities, returned to this country to-day on the French liner *La Champagne*, from Havre. He came over with the body of his wife, which is to be interred in Woodlawn cemetery, Philadelphia.

Dr. Evans is now seventy-five years of age and is said to be worth \$35,000,000. About five million of this property is in New York real estate, the remainder in Paris and elsewhere. This fortune has been gathered since Dr. Evans first went to Paris from Philadelphia in the forties.

During the empire of Napoleon III. his fame as a dentist was world wide. In that capacity he served Napoleon, the Empress Eugenie and all the monarchs of Europe, except Queen Victoria and the present sultan of Turkey. Victoria's children and the present czar of Russia, when children, were his patients. Dr. Evans has orders innumerable, and it was in his carriage that the Empress Eugenie escaped from Paris after the battle of Sedan.

The wife of Dr. Evans died on June 17th last at their residence in Paris. The doctor was accompanied on the voyage by Dr. Edward S. Crane, his junior partner. At 4 o'clock on Wednesday afternoon services over the remains of his wife will be held at St. Mary's Protestant Episcopal Church, Philadelphia.

Dr. J. H. Spaulding, of Paris, is visiting his native land. He is stopping for a while in Minneapolis, and from there will go to New York.

The First President.

It was a fitting tribute to Dr. Fillebrown, that he should be made the first president of the National Dental Association. His labors for the union of the two organizations were heavy. That he did his work well goes without saying. Under his genial leadership, everything will move with a smooth start to a grand future.

Officers of the Southern Dental Association (Southern Branch of the National Dental Association.)

E. P. Beadles, President, Danville, Va.; W. E. Walker, Pass Christian, Miss., T. P. Hinman, Atlanta, F. P. Welch, Pensacola, Fla., Vice-Presidents; B. D. Brabson, Knoxville, Tenn., Treasurer; C. L. Alexander, Charlotte, N. C., Corresponding Secretary; W. S. Foster, Atlanta, Recording Secretary; W. T. Arrington, Memphis, V. E. Turner, Raleigh, N. C., S. B. Cook, Chattanooga, Tenn., R. K. Luckie, Holly Springs, Miss., W. R. Clifton, Waco, Texas, H. E. Beach, Clarksville, Tenn., Executive Committee.

Worth the Whole Trip to See.

At the Old Point Comfort meeting, Ward's Natural Science Establishment of Rochester, N. Y., made an elaborate exhibit of skulls showing human and comparative odontology, which was worth the trip to see. It would be impossible to give a detailed list of the exhibit. With such a collection in dental colleges odontology could be taught as never before.

The thanks of every one are not only due Mr. Ward, but to Dr. Barrett, the chairman of the committee having this matter in charge. Cannot this exhibit be repeated at the meeting of the National?

Dr. L. D. Caulk, manufacturer of Caulk's specialties, has bought a half interest in *Welch's Dental Monthly*. The name has been changed to the *Dental Brief*. Mr. A. S. Robinson is manager and Dr. T. B. Welch editor.

Officers and Committees of the National Dental Association.

President, Thos. Fillebrown, Boston.

Vice-President for the East, Jas. McManus, Hartford.

Vice President for the West, L. L. Dunbar, San Francisco.

Vice-President for the South, B. Holly Smith, Baltimore.

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* These go out in 1898.

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Committee on State and Local Societies—J. Taft, Cincinnati, O.; J. Y. Crawford, Nashville, Tenn.; Jas. McManus, Hartford, Conn.

Meet at Omaha the first Tuesday after the last Saturday in August, 1898.

There are some important committees not yet named.

We must lay ourselves out to make a great success of this movement, and I have no doubt, eventually, we shall succeed.

Yours truly,

GEO. H. CUSHING,
Secretary.

Cleansing Teeth.

The matter of thoroughly cleansing the teeth of patients is of so much importance, and a means of prophylaxis so generally neglected, that we take pleasure in quoting from an article by Dr. A. H. Brockaway of Brooklyn and reported in the *International Dental Journal* for August.

In the writer's practice he makes it preliminary to all other operations for several reasons: it familiarizes one with the character of the mouth and the condition of the teeth, and also—and this is important with timid or inexperienced patients—it serves as an excellent and comparatively gentle introduction to the more severe operations which are to follow.

Having seated the patient in the chair, the assistant—a young lady, by preference, always—fastens around the neck a large napkin for the purpose of protecting the clothing from being soiled, often supplementing this with a light rubber apron if thought necessary—a precaution much appreciated by fastidious persons.

Lightly smearing the lips and corners of the mouth with refined vaseline to prevent chafing, he then proceeds with appropriate scalers to remove from the teeth every particle of tartar or other deposits, being greatly aided by the assistant, who holds back the lips and cheek, and illuminates the mouth with a small mirror or the electric lamp, frequently washing the loosened accretions with tepid water from a syringe. A

few drops of listerine, or some of the analogous preparations, added to the water give a grateful, soothing freshness to the mouth, sweetening the breath, and rendering the operation more agreeable to all concerned.

His next step is to thoroughly polish all accessible surfaces of the teeth with a wheel brush, of suitable stiffness, run by the dental engine, and charged with pulverized pumice-stone moistened with water or listerine. Should there still remain, as is often the case, persistent stains, he follows the brush with buffers or points of moose hide, or rubber charged like the brush, and sometimes rendered more efficient by the use of a little tincture of iodine or peroxide of hydrogen. In extreme cases, where the stain is very persistent, he moistens the polisher with a drop of dilute phosphoric acid with much advantage.

All the exposed portions of the teeth having been cleansed and polished, there still remain the proximal surfaces scarcely touched, and these are extremely difficult to reach, especially if the teeth are in close contact. Having made sure of the possibility of getting at these with any polishing agent, however fine, by first passing thin metallic strips between the teeth, he then proceeds to use fine tape or floss silk charged with the pumice powder, drawing it back and forth with a sawing motion, and bending it around to reach every point of the proximate surface.

For this part of the operation he has never found anything so efficacious and satisfactory as what is known and sold at the dental depots as dental fibre, or tucum, a tropical production said to be taken from the palm leaf, and charged naturally with silex like the cortex of a reed, and which, consequently, can be used either wet or dry. This is so fine and strong that with care it can be readily drawn between the teeth, however close they may be, and, given the proper motion, will quickly and effectively remove all stains, leaving the surfaces beautifully polished and clean.

Retaining Bands.

For retaining, especially the central incisors of children, which are often wide apart, preventing the true eruption of laterals, and which have been drawn together, Dr. W. A. Bryant, of San Francisco, in the *Stomatological Gazette*, says a simple method of making gold retaining bands to take the place of T bands, or where the silk ligature is not desirable, and to do away with the ugly effect of a gleaming mass of gold, which is unavoidable when the pressure is exerted from above, is to take a band of spring gold about $\frac{1}{8}$ of an inch wide, and form it to the lingual surface of the teeth to be retained or regulated forming a clasp hook at either end. After trying it in the mouth of the patient and finding that the band lies close and does not interfere with the inferior teeth, with a needle point mark the spaces between the teeth. At the points marked solder at right angles to the band strips of spring gold about $\frac{1}{4}$ of an inch in length. These are then divided and turned to right and left, forming hooks. The overlap of these hooks should not be more than $\frac{1}{8}$ of an inch. As the tooth comes into the true line, pressure may be increased and diminished to suit the case. The simplicity of making and exactness of this form of retaining band should cause it to find favor in the eyes of our profession.

Splitting Ribbon Saw.

The thin ribbon saws, so useful at the operating chair, are frequently too wide. They can be easily split in two with plate shears, and be made to serve their purpose much better.

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VOL. I.

ATLANTA, GA., SEPTEMBER 16, 1897.

NO. 2.

SOME OBSERVATIONS ON CROWN WORK.

BY W. H. BAILEY, D.D.S.,
Menomonee, Wis.

Since the method known as crown and bridge work came into general use, the busy operator may see this class of work in all varieties, from that done by the most skillful dentist to the product of the charlatan and bungler who advertise cheap crowns and do the work accordingly.

The method of supplying badly decayed teeth with crowns, and lost teeth by bridges, is a great advance over partial dentures supported by a plate of any kind; and there is no substitute for lost teeth, or those hopelessly decayed, which can compare in usefulness, cleanliness and natural appearance to a properly adjusted crown or bridge. Though there has been great improvement made during the last few years in the manner of making and adjusting the various kinds of crowns, there is still room for improvement. There is a principle involved in the construction of the crown with banded root which is contrary to nature or incompatible with live tissue, and at the risk of being considered incompetent to do this class of work, I assert that no crown should be used with a metal band driven under the gum and the metal left in contact with the same, if it is possible to secure a firm attachment without doing so. After carefully fitting a gold cap over the root of an incisor or cuspid, and having finished and adjusted the por-

celain-faced crown to the entire satisfaction of the patient and myself, it is not pleasant, after a few months, to see the gums around the crowned tooth look unhealthy, and later, to find they are receding and exposing to view the gold band on the labial surface. When this condition presented I supposed that particles of cement had been left under the gum, or that the edge of the band was not burnished close down to the root; but careful examination would reveal nothing which could seem to irritate and cause the diseased condition. In some cases I have removed the crown and put on a Logan crown without band, with result that gum became perfectly healthy. After noticing this condition of the gums around many crowned teeth, I was curious to know if other operators had similar experience, and on inquiry I found they had. Upon examination of those cases wearing a porcelain crown with no band, or the Downey crown with thin band covered with porcelain, but few cases showed any disease of gum, and in those cases it was due to mechanical irritation. This argues that the diseased condition is caused either by faulty manipulation or contact of metal with the gums. When so many gold crowns with band perfectly fitted cause all degrees of disease, from a slight turgid appearance to suppuration and recession, which exposes the entire width of band, it appears that the cause must be in the metal band. Even in those cases where the root has been cut low beneath the gum and a porcelain crown has been placed with neck too large or too small

for the root, we find little or no disease if the mouth is kept clean.

I have for a long time observed the effect of the banded root, but have been unable to explain the cause. On page 302 of *Dental Cosmos* for April, 1897, I find an able article by Dr. S. B. Palmer, which fully explains the cause of this trouble, as well as others which are so often seen in the mouth. He says: "It is a mistake to suppose that two amalgam fillings can be so nearly alike that no disturbance will follow." "Observe the appearance of gum between amalgam fillings." The same appearance of gum is seen around teeth with banded roots. On page 308 of same article the doctor gives a minute description of a case which exactly fits the situation and recommends removal of band from under gum to effect a cure. This will, without doubt, cure the case, and proves conclusively that the irritation so often seen around the gums of crowned teeth is caused by electricity generated in the mouth. I would not discard the gold shell crown for molars and bicuspsids, as there is no other kind of crown which is so easily made and, all things considered, gives such satisfaction. For incisors and cuspsids with pulp-canals greatly enlarged by decay, it is also necessary to use a band around the root; but in a large majority of incisors and cuspsids to be crowned, the all porcelain crown like the Logan, without band, makes the strongest and most natural crown. Where the upper cuspsids, for instance, are to be used as abutments for a bridge carrying the four incisors, I grind the root to a little below gum margin on the labial side, and leave it at least a line above the gum on lingual side. To the end of the root burnish a thin piece of platinum or 24-carat gold plate, force a large size platinum pin through it and into the pulp-canal which has been previously enlarged to receive the pin. We are then ready to take the impression and proceed as usual with the making of the bridge, and when finished and adjusted over strong roots in this way, with the large pins tightly fitted in root-canals, it needs no band around the roots to make it firm.

ATTENTION! RIGHT ABOUT FACE!

BY E. D. BROWER, D.D.S.,
Lo Mars, Iowa.

In twenty years of practice my attention has been called more forcibly to the lack of attention on the part of the dentist to the cleaning of the teeth than to any other branch of our work. Judging from the appearance of the mouths that come to me for examination, I do not think there is one dentist in fifty who pays any special regard to the cleaning of his patient's teeth. I am not referring to the country dentist alone, but will include our city cousins as well.

It is not an uncommon thing to find cases with crowns, bridges and nice gold fillings surrounded with filth. And if you inquire closely the patient will say, "The dentist did not say anything about cleaning my teeth." One flimsy excuse that some dentists give is that they cannot get anything for the time spent in cleaning, or as a young dentist said to me not many months ago, "I am too busy to clean every set of dirty teeth that comes in." He has since moved to another town.

If a dentist is too busy to properly clean his patron's teeth, he is too busy to do anything else for them properly.

Another phase of the subject: We have a class of dentists in the west that can do pretty good work, but they have a bargain-counter, and when the settlement comes, to be real nice and more liberal than the fellow across the street, will throw the cleaning in. This man, if he ever did clean a set of teeth honestly, soon learns to dexterously polish the labial surface of a few of the anterior teeth and call it a cleaning.

Then we have the lazy man, with that dollar-big-as-a-cart-wheel feeling, who fills teeth with cement and amalgam, guarantees it to be better than gold, and *he* never hurts. This man sometimes gives the whole snap away when his conscience pricks

him a little hard, and will say to his patients, "There is tartar under the gums but it will hurt to take it off, and I didn't want to hurt you." This man will usually extract all teeth that he can induce his victims to part with, and make rubber plates.

Then we have the young graduate who has just started in practice, thoroughly imbued with the idea that there is big money in the practice of dentistry, and all he has to do is to talk crown and bridge work. He would not soil his fingers to clean a set of teeth; it is beneath his dignity as a professional man. But he will announce in his *professional card* that he uses all the latest improved instruments; does crown and bridge work, and above all, guarantees all of his work.

We still have a class of practitioners that I have not mentioned. We have the good, hard-working practitioner who plods along and thinks he is doing his best in every case, but has never awakened to the fact that he is not doing justice to his patients. He will scale the teeth and brush them so they will look very nice at the time, but will probably never see a pyorrhea pocket in the mouth, if there is one. This is the man I am after. The other fellows are not in reach. To this man who honestly thinks he is doing all that can be done for his patrons' teeth, I want to say, "Right about!" You are not doing justice to your patrons or to yourself. Commence right now to insist on your patients taking greater care in brushing their teeth. Have the patient for whom you clean teeth come back in a few days to let you see that all is well. You will likely find a little accumulation that you failed to reach at the first sitting. Never dismiss a patient until the gums are in a healthy condition. Do this for one month and you will be surprised to learn how careless you have been. Do this for one year and you will be pleased to see how much nicer your fillings look. You will be pleased when you see nice clean mouths coming back to be examined and to have the patient say, "My mouth feels better than it formerly did."

OXYCHLORIDE OF ZINC.

BY S. T. KIRK, D.D.S.,
Kokomo, Ind.

This, the oldest of our cements and usually known as Os Artificial, is, in its proper use, the very best of the cement family. There are preparations of the oxyphosphates that will stand in exposed places better, but there are none which have so good preserving qualities.

In the days of long ago, more than a quarter of a century, the older members of the profession remember it as the only cement at our command. It is from the observance of its use in the past that I wish to speak. Having practiced in the same place for more than thirty years, I have had a good chance for observation.

Early in my professional life I learned that many failures came from the filling of roots with gold, and even from the most eminent practitioners; circumstances led me to fill roots with Os Artificial instead. And in after years I have learned its true value, especially since crowning has been in such common use. I find many roots of teeth that were so filled, the crowns having been entirely broken down to the line where the Os Artificial protected it, and then remained in good condition, waiting to be redeemed and placed to good use in supporting the modern crown. I have found many roots buried by the gum which, after consulting my record and finding they were filled with this material, I have immediately disposed of the gum and found the root solid and able to hold a useful crown. I use that preparation of oxychloride of zinc known as Os Artificial, and for many years I filled the entire root with it, but often, if great care is not used, the fluid will pass through the foramen and cause inflammation of the periosteum; hence, on the introduction of gutta-percha for root-filling, I fill the canals partially with it, but invariably use the Os Artificial for the main

part of pulp chamber. I think the fluid permeates the tubuli and preserves the whole tooth structure as nothing else can. For the same reason I use it in all large cavities, covering the nearly exposed pulp with a non-irritant. I fill the cavity one-half or two-thirds full of the Os Artificial, pressing it solidly into its place with spunk. This cannot be done with the oxyphosphates.

Thus far it makes a better filling to preserve the tooth structure than any metal, and at the same time makes a solid and even foundation upon which to build the metal, which need be no more, in many cases, especially large crown cavities, than as a cork to a bottle.

In filling a root having an alveolar abscess with fistulous opening, if a small quantity of the fluid passes through the foramen and the canal is immediately filled with the cement, it invariably becomes sound and well in a short time, and remains so.

The two points to be guarded against are, first, in root-filling, not to let the fluid pass through, as it will inflame the periosteum; second, to protect the nearly exposed pulp in large cavities.

A piece of cotton moistened with the fluid is most excellent to wipe out all cavities before filling, on account of its preserving qualities.

Shrinkage of Castings of Metals.

Pure aluminum (13-64 inch) 0.2031 inch to the foot

Nickel aluminum, casting alloy, (3-16 inch) 0.1875 inch to the foot.

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Copper, 0.1875 inch to the foot.

—*Aluminum World.*

TWO TYPICAL CASES.

BY L. P. HASKELL, D.D.S.,
Chicago, Ill.

Herewith are two typical cases of edentulous upper jaws, which are somewhat peculiar, and considered by those who have seen them as difficult to successfully handle.

No. 1 is the worst case I ever handled. The process had all disappeared, and the little ridge remaining being a flexible

No. 1.

one of membrane. On the right side a portion of the bone was removed because of necrosed conditions. The center of palate has an abnormal elevation of bone, covering a large portion of the surface.

The patient said seven sets of teeth had been made by different dentists, but all were failures, and yet I had the most perfect success with aluminum plate.

The only change made in the model was a "relief" of a thin film of wax over the hard center of palate (the thing needed in 99 per cent. of cases, as it is the only portion of the upper jaw which never changes, so that unless this provision is made there is, sooner or later, a rocking over the center). A little relief was made on the ridge upon the right, where bone had been removed. Upon trying in the plate and pressing up with the finger, I found I could not remove it except with an instrument. The teeth

and gums were one inch long in front in order to restore features.

The patient, eighteen months later, said he often forgot he was wearing artificial teeth.

I do not believe, from past experience, it would have been possible to have secured as satisfactory results with rubber.

No. 2 represents a case where absorption has taken place to such an extent there is no ridge left; but the center of palate is one representing less than 1 per cent. of mouths, where a soft condition exists, and, as is usual in such cases, there is a crevice in the center.

No. 2.

In such cases no "relief" nor change of any kind is needed. The model is as it came from the impression. A gold plate was made with rubber attachments, and the patient was gone in less than a week on a political campaign for three months, making speeches every day with no inconvenience whatever.

In this case I tried a rubber plate with no satisfactory results.

Many dentists who have seen model No. 1 have said they would not have undertaken the case, believing it impossible to make a satisfactory denture.

An air-chamber would have been worse than useless, for the anterior and posterior margins would have caused constant rock-

ing of the plate, and yet many a dentist would have considered it indispensable.

It must not be forgotten that the articulation of these cases was a very important factor.

IMPROVING DENTAL SOCIETIES.

BY B. S. SCOTT, D.D.S.,
Ellensburg, Wash.

During the present half-century the dental profession has been elevated from charlatany to the real value of its meaning: Science of Dental Surgery! This has been effected by the combined efforts of our colleges, journals, and, not the least, by the dental society. The dental society tends to stimulate every individual to the sincere study and observation of causes of diseases, their effects and cure; to record the same, thus rendering his conclusions more accurate. These individual researches are unified into the broad stream of accepted practice, benefiting the entire profession and making a complete school for the practitioner. Thus the most important function of society is to bring together and unite for consideration individual opinion, and with truly democratic criticism, abide by the consensus of opinion as decided by a preponderance of evidence.

Besides the social functions, society work is presented by written essays and practical clinics. As to the improvements of the theoretical part many points can be given. The iron-clad enforcement of parliamentary rules should give way to the old-fashioned experience meeting offering free discussion during the meeting and not after adjournment, as is now the case.

Too little time is given to the preparation of papers, making them incomplete and lacking in the necessary work. There are too many papers written on ethics and on business methods. Their efforts are most laudable, but the hoped-for result is seldom

attained. On the other hand, too few papers are written on pathological conditions, on filling materials, etc. Therefore the production of essays on more practical subjects should be encouraged.

The clinical feature of the society is not well managed as a rule. Those showing pathological conditions and treatments should, of course, be demonstrated on living subjects, but methods of making crowns, inlays, combination fillings, etc., can be better demonstrated out of the mouth by dummies, charts and sectional models. Every detail of the work could then be seen by the audience, and every step of procedure explained. Too many clinics going on at the same time is not advisable. One by one the mechanical ones should be presented. At each chair where a clinic is going on a placard should be hung telling what the clinic is and giving the operator's name. Each clinic at the chair should be under the surveillance of a special committee, who should carefully observe the operation and make a report to the society, criticizing the work in detail, if need be. This would give the whole audience the direct benefit of each clinic, and would induce valuable discussion. When all the defects in the clinic shall have been studied, the most benefit will be derived.

Diamond Drills, How to Use.

A writer in *Ash's Quarterly* says: In using a diamond drill for making cavities in artificial teeth it is most important to bear in mind that the point should be dipped in sweet oil or water, and placed on the work before the engine is started. The engine should be stopped as often as the drill shows signs of becoming dry, and each time after it has been dipped in the lubricant it must again be placed on the work before the engine is started. It is, perhaps, needless to add that the hand-piece must be held firmly and steadily in position to insure success and to avoid breaking the drill.

POINT OF CONTACT.

The following article, on a most vital question of tooth-saving, by Dr. R. M. Morse, of Lansing, Mich., *Ohio Dental Journal*, cannot be read too often:

"The normal set of teeth in the mouth of a human adult offers sixty points of contact which represents about three-fifths of the probable points at which caries attacks the teeth. Why is it that the teeth decay more at this point than others? It is due to the fact that at this point and just away from it toward the cervical margin, the surface is not self-cleansing, and there becomes attached to the teeth a thin film of agglutinated substance, made up principally of micro-organisms. The food in process of mastication does not disturb them. The brush passes over the buccal and lingual surfaces, and still they remain. The toothpick will dislodge some, but it is necessary to use dental floss, or something of that nature to polish and scour them off. If all surfaces of the teeth were kept cleaned of this accumulation, we would soon find that our profession was considerably crowded, but the laity have not been sufficiently drilled on this method, and those who have been instructed do not find the time to do it thoroughly, hence we are called upon to correct the results of their defiance of Providence. This agglutinated mass of organisms secretes acids; at first attacks the cement that binds the enamel rods together, on account of its not being as dense as the enamel rods. Then the rods themselves are decalcified, and gradually disintegrated, leaving an opening into the surface. In such openings as fast as found the microbes establish themselves, and from now on have it all their own way unless the cavities are scientifically stopped by some member of our profession. It is our duty to our patients to instruct them in the use of dental floss and brush, to thoroughly cleanse

the teeth. Abrasion is the only means by which this can safely be accomplished, and then it is necessary that it should be attended to religiously. Mouth-washes aid in making the microbes uncomfortable but do not remove them. Careful brushing and the use of dental floss in connection with mouth-washes is the best method of attack.

But the thing that I wish to call attention to particularly is the restoration of this point of contact by filling. Dr. Black tells of the new method of cutting away the proximal aspects of the molars and bicusps that are affected by caries, and replacing with large metallic surfaces properly shaped to control the proximal space, and thus offering a roost for the microbes that they cannot destroy with their acids. I quite agree with the doctor in the main, on the counts he has made, in the case of considerable destruction of the enamel and dentine at this point, but I feel that there is a class of cavities that can be treated in a less heroic manner with good results. The moderate and small-sized cavities around which the enamel is not affected would be of this type. Take two moderate sized proximal cavities as an example in teeth of normal shape and position. At first examination, if time permits, place between these teeth a pellet of cotton saturated with chloro-percha. This is repeated at intervals of three or four days, increasing the size of the pellet until the space is sufficiently large to permit of *thorough* preparation of cavities and of filling and finishing the fillings, and when the teeth resume their natural position the oval surfaces of the fillings should come in contact, and at no point should the enamel on either tooth touch the opposing filling or tooth. The point of contact should be as near the occlusal surface as consistent with the case. Treated in this manner the margins of the enamel are as self-cleansing as under the best conditions that nature provides, and gives the gums in the proximal space good protection. Dr. Miller and Dr.

Black have for some time maintained that the fluids of the mouth were responsible for carious teeth only as they aided or opposed the growth of organism. Dr. Williams has demonstrated this to be the fact, and accounts in this way for predisposition to decay, whether the teeth are what are known as hard or soft teeth. In cases of marked predisposition it is probably necessary to apply the method Dr. Black advocates. With incisive teeth we see many cases of recurrence of decay at the cervical and at the incisive margin of cavities, that were well prepared and carefully filled, but when they resumed their natural position the point of contact was at either of the margins of the enamel rather than the filling. This result probably was due to not having sufficient space by separating to contour the filling sufficiently to allow of their being finished and still have the contour project beyond the margins and act as a buffer to hold the enamel apart, so that they may be cleansed and cleanse themselves to a degree.

I wish to appeal from the decision and practice of some good men in the profession that the use of the matrix is in opposition to these results unless an extreme amount of separation has been procured, while the making and the placing of the filling is a little easier. The completed filling does not often meet the requirement of the restoration of the original tooth.

In crown work where the space is contracted, there is a liability to having straight surfaces in contact that it is desirable to avoid. Separating will often correct this condition, so that cleansing spaces will remain and the gum septum be restored.

In conclusion I wish to appeal to the dental profession to be more thorough in separating teeth to be filled, no matter what filling material is to be used. Make the point of contact of a shape that would best protect the proximal space from the encroachment of food. Have the fillings rest against each other holding the enamel apart from

touching adjoining tooth or fillings. This metallic point of contact acts as a protection to the tooth from redecay as a sled runner is protected from wear by the iron shoe fastened upon it.

Quickly Made Matrix for Plastic Fillings.

Dr. Theo. F. Chupein, in writing on this subject in *Dental Office and Laboratory*, says cut a piece of thin German silver plate, such as is furnished for matrices, about one-eighth of an inch wide, or narrower, and about one-half inch longer than is necessary to encircle the bicuspid or molar tooth you may be about to fill. The rubber dam having been applied, the cavity prepared, and all things ready for the insertion of the filling, pass the strip of metal around the tooth, seizing the two ends with flat-nose pliers, and draw it up close to the tooth, in the same way as you would do if you were making a band for regulating purposes. When closely fitted, remove it and heat the ends, and while hot place on one end a film of hard or adhesive wax. Now replace the band on the tooth, and by heating the noses of the flat pliers, the ends are again seized. The heat of the pliers melts the hard wax which was placed on the ends of the band matrix. The matrix is held with the pliers until the wax is thoroughly cold. When removed the matrix hugs the tooth closely, and the wax is sufficiently tenacious to hold it in place until any plastic filling may be inserted.

Dressing and Filling for Root-Canals.

W. Dunn, D.D.S., Florence, Italy, says: A simple, efficient and non-irritating dressing for root-canals is made by mixing cosmoline with oxide of zinc (about 5 parts of cosmoline to 1 of oxide of zinc). It is not putrescible, and will do well as a permanent filling for root-canals.

Rules for Converting Weights and Measures into Metric Weights and Measures.

WEIGHT EQUIVALENTS.

To convert grains into grammes multiply by -----	0.065
To convert grammes into grains multiply by -----	15.5
To convert drachms into grammes multiply by -----	3.9
To convert ounces (avoir.) into grammes multiply by -----	28.4
To convert pounds (avoir.) into grammes multiply by -----	453.6

MEASURE EQUIVALENTS.

To convert cubic centimeters into grains multiply by -----	15.5
To convert cubic centimeters into drachms multiply by -----	0.26
To convert cubic centimeters into ounces (avoir.) multiply by ---	0.036
To convert pints into cubic centimeters multiply by -----	473
To convert liters into ounces (avoir.) multiply by -----	35.3
To convert gallons into liters multiply by -----	3.8

The Open Doors.

How different now are the ways of dentists as compared with the preassociation period. All things are now held in common, as it were. No secrets, no locks, no spies. Fellowship is a wonderful developer of human kindness and sympathy. Often a man prejudged as mean will, on closer acquaintance, prove to have one good trait of character. The selfish man is the meanest man in the world. The greatest fools of the earth are those who cannot be taught and have not realized that they know nothing absolutely. A man is not on the road to knowledge until he finds out his empty condition intellectually. When he does ascertain this fact, then he hungers and thirsts for knowledge.

THE
American Dental Weekly
 ISSUED EVERY THURSDAY.

Editorial and Publication Offices:
 34 WHITEHALL ST., - - ATLANTA, GA.

EDITOR:
 B. H. CATCHING, D.D.S.

FRED. BROSIUS, D.D.S., Editor of the German and French.

Subscription \$2.00 per year; \$1.00 for six months—Including Canada and Mexico; other countries \$3.00 per year.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited. The editor is not responsible for the opinions of contributors. Advertising rates sent on request.

Atlanta, September 16, 1897.

SYNOPSIS OF THE PENNSYLVANIA DENTAL LAW.

The State of Pennsylvania has recently enacted a law governing the practice of dentistry in that commonwealth, which possesses some new features in dental legislation, and which, taken as a whole, is one of the best, if not the best, of State laws. A full text of this enactment can be had of the Superintendent of Public Instruction at Harrisburg.

It establishes a Dental Council, consisting of the Superintendent of Public Instruction, the President of the Board of Health, and the President of the Pennsylvania Dental Society.

The duties of this Council are to supervise the examinations conducted by the State Board of Dental Examiners, of all applicants for license to practice dentistry in the State, and to issue licenses to such applicants as present satisfactory and properly certified copies of licenses from the State Boards of Dental Examiners of other States.

A licentiate of another State on the payment of ten dollars to the Dental Council

and the filing of a copy of his license, with the affidavit of the president and secretary of such board, showing that the standard of requirements by said board is substantially the same as that of Pennsylvania, will be licensed by the council without further examination.

The Board of Dental Examiners consists of six members. They are nominated by the State Dental Society from the Society, and are appointed by the governor.

Applicants for license must deposit a fee of \$15.00 with the Dental Council, with satisfactory proof of being twenty-one years of age and of good moral character, and that he has a competent common school education and has received a diploma from a college recognized as of good repute by the Board of Examiners.

The examinations are written, and embrace the following subjects:

General anatomy and physiology, Special dental anatomy, Dental histology, Dental physiology, Chemistry and metallurgy, Materia medica, Dental pathology, Bacteriology and therapeutics, Anesthesia, Oral surgery, Principles and practice of operative and prosthetic dentistry.

A specimen of operative and prosthetic work must be presented by each applicant, duly attested by the demonstrator of his college, or else the applicant must clinic before the board.

Before an applicant can go before the Examining Board he must first procure a certificate from the Council showing that he has complied with all the requirements of the law.

The compensation of the members of the Board of Examiners is more liberal than in any other State. The board first pays the council \$100, and if any surplus remains at the end of the year it is apportioned among the examiners, not to exceed \$500 to each examiner. The surplus above that goes into the State treasury.

To practice without a license is a misde-

meanor, and upon conviction a fine of not less than \$50 nor more than \$200 is imposed.

If an applicant fails to pass the board he is entitled to another examination after the expiration of six months and within two years without an additional fee, but for any other subsequent examination he must pay again the regular fee

The law does not prevent *bona fide* students of dentistry in the regular course of their instruction from operating upon patients at clinics, or under the immediate supervision and in the presence of their preceptor, who is a lawful practitioner, provided that no fee, salary or other reward for such operations be received, either directly or indirectly, under any circumstances, by any student of dentistry.

Educating the Public.

That the public needs educating on matters pertaining to dentistry is made manifest in many ways. Recently a journal devoted to one of the arts gives an editorial saying that teeth are now filled with porcelain, which is dissolved in a solution, and that it has superseded all other filling materials.

While this citation may not be entirely relevant, yet it is enough to cause us to think of some way by which the public could be more enlightened on dental matters.

Against this desire on the part of the profession, however, there runs a counter-current set forth by men who make their living by duping the public, and as all people can be fooled sometimes, and a large majority fooled all the time, there seems little hope for disseminating knowledge that would benefit the masses. If it can be done at all, about the only way is through school text-books, beginning with the younger generation. This brings us to the query: Would it not be well for the National Dental Association to consider this matter at its

first meeting? In his presidential address at the last meeting of the Georgia Dental Society Dr. Chappell spoke forceably on this subject. Think about it till the meeting at Omaha, and see if some way can't be devised for a text-book for use in schools.

Society Improvement.

The article by Dr. Scott, in this issue, on Improving Dental Societies is timely. It shows that he has been a close observer and has done some thinking as well. The question is a vital one. Our State societies can be much improved and their work made more beneficial to a larger number of members. Not only this, but they can be made so attractive and helpful that others seeing our good works will be constrained to join, thereby causing the efforts of the few, comparatively, to reach many.

We have had occasion to say before, and say it again, that very much depends upon the presiding officer. If he is there simply to satisfy an ambition to rank as president, his official term will not amount to much; but if he is placed there by his associates for his real worth to the society, his official position will count much for society improvement and advancement.

THE AMERICAN DENTAL WEEKLY would be pleased to have other suggestions on the line of society improvement.

A Hypocrite.

Dr. Barrett, in speaking before the College Faculty Association, said "he who assumes to arm the young men of our country for the battle of life, to fit them and equip them for an honorable career simply that he may minister to his own good, who takes the teacher's place and ascends the instructor's rostrum from selfish motives, is a worse hypocrite than the preacher whose every-day life belies his sermons."

A Simple Matrix for Plastic Fillings.

Before the New York Institute of Stomatology Dr. J. F. P. Hudson reports a simple matrix which he finds exceedingly useful and efficient. We make extracts from the *International Dental Journal*: Thin steel, after annealing slightly, is cut with scissors to the different sizes and general shapes of the approximal aspect of the tooth; pass a file around all its edges to smooth it for the tongue, and also to prevent any burred edges interfering with its slipping to place; punch tiny holes near the buccal and lingual edges for convenience of removal, then place the strip on a piece of lead and strike with the hammer a small convex bead held upon it (He uses a small, round-headed picture-nail, which he case-hardened and polished), thus stretching (not merely bending) the thin steel into a concave condition in every direction. It is quite easy to give in a moment just the convexity needed for the individual case, and it is sometimes of value, in irregularly placed teeth, to convex it more on one part of the approximal surface than another. The delicate strips will go into a very thin space and hug the surface like a glove, being coaxed to their places with any large end-pusher, and with a curving motion, presuming, of course, the surfaces to have received the usual polishing preparatory to filling. The convexity that impinges against the adjoining tooth, combined with the tempering effects of the hammer-taps in forming them, gives to them sufficient strength and stiffness to hold their place against the tooth perfectly. They are very firm and strong. For amalgam fillings he leaves them in place over night, and, upon taking them out the next day, has a shaped surface that is ideal.

Cocaining Pulps for Removal.

The removal of dental pulps, which is never an undreaded operation by the patient, and not always an easy one for the operator, can often be accomplished very satisfactorily to both. Dr. J. Y. Crawford, of Nashville, says: Of all the operations in minor surgery demanding local anesthesia, the removal of a live pulp most demands it. Having decided through diagnosis by exclusion that it is clearly a case of pulpitis and that the pulp must be removed, put on the rubber dam, dry the cavity, wipe it out with bichloride of mercury 1-3000, dry again and repeat several times. When satisfied that it is sterilized peel away the dentine carefully until you get a tiny exposure, then take a little muriate of cocaine, 10 per cent. solution on a tiny wad of cotton and lay it over the point of exposure. With your fingers form of wax a lid for the cavity of the tooth, fit it over and convert the tooth into a force pump, forcing in the cocaine. Then trim away more dentine, enlarge the exposure, and work your pump again, forcing in more cocaine; you will find that you can remove the pulp painlessly and pull it clear out of the lingual canal, which will offer no resistance. Now before going any further, cork up the canal to prevent any debris entering. Now work in more cocaine, and with a broach remove the pulp from the next canal and fill that up, and so on. That tooth is worth all the pains you can take with it, and you want to keep the canals in an aseptic condition, preventing the entrance of any debris from the dentine you will remove in preparing the cavity for filling. That pumping process will enable you to anesthetize the pulp so that you can remove it without pain to the patient, and you will not want any more arsenic. In case of hemorrhage the application of the bichloride of mercury solution will arrest it at once.

The WEEKLY would like to have that little practical idea you have found so useful in your laboratory or office.

Alum for Prevention of Tartar.

Surprises are constantly occurring. We have always thought that alum in any quantity was injurious to teeth. Now comes Dr. C. N. Pierce, who says he has been using a solution of alum to prevent the accumulation of tartar; over a dozen patients have tried it, and he has been surprised at the excellent results. He tells them to take a glass of water with a pinch of alum in it, and rinse the mouth freely once a day. It is harmless, he says, to the teeth, and has kept the gums in good condition, where previously there was a heavy accumulation every month or six weeks.

Dr. Leffman, a chemist, was called on to answer about the injurious effects on the teeth. In the same journal (*International Dental Journal*) he says he does not think alum would produce any corrosion. It is not an active corrosive agent. He should therefore not expect much corrosion from the alum. If the quantity were large, it might have an astringent action on the gums. He feels that the experiment would probably show very little, if any, corrosion of the teeth proper. Alum is not like a free acid. It has the properties of an acid, but simply because there is a want of balance between the alumina and sulphuric acid. It shows the properties of an acid to litmus-paper and to our taste. But there is as much neutralizing material in it as in baking soda. We are apt to think that alum is an acid substance, when in reality it is merely a substance with an acid reaction.

The chemist's answer is a little equivocal.

Glass for Operating Windows.

Plate glass will admit more and better light into a room than the ordinary sheet glass, which is not so transparent, and which is often scared by waves and blisters. Good plate glass, and the American is as good as the French, will admit twenty-five per cent. more and better light.

Officers of the Minnesota Dental Society.

The 14th annual session of the Interstate Dental Association was held in the Medical Building of the State University, in Minneapolis, September 7th, 8th and 9th.

The meetings were well attended and full to the brim of things of interest.

The following were elected as officers for the coming year:

President, C. A. VanDuzee, St. Paul; Vice-President, L. P. Leonard, Waseca; Secretary, H. L. Cruttenden, Northfield; Treasurer, H. M. Reid, Minneapolis; Master of Clinics, C. H. Goodrich, St. Paul; Chairman Examining Committee, T. B. Hartzell, Minneapolis.

St. Paul is the place to have the next meeting.

H. L. CRUTTENDEN,
Secretary.

Massage.

Dr. W. C. Barrett says: In inflammation of the gums, in cases of stomatitis showing on the external plates of the alveolar walls, in most cases of turgidity, or disturbed circulation about the gingivæ, massage with the ball of the finger will be found very useful. It presses the blood out of the distended capillaries, hurries the circulation in the sluggish blood-vessels, and gives tone to the whole local territory, reestablishing the nutrient currents and promoting resolution of any exudate material. Let the patient rub the gums and disturbed territory with the ball of the finger frequently.

Lady Dentists in Britain.

The second lady has qualified to practice dentistry in Great Britain.

Remember the WEEKLY will reach you once a week, four times a month, fifty-two times a year. Send your subscription at once; begin with the beginning.

Separating Impression and Model.

Dr. J. A. Robinson, Morrisville, Vt., says: I was taught, after the model was hard, to whittle away the impression and leave the model untouched by the knife, if possible. I now drop the model and impression into hot water for a minute or two, after which they will separate without the least trouble, leaving the model much smoother than if whittled out. Another, and, perhaps, a more important result of this method of separating impression from model, is being able to make another model in the same impression, for, in nearly every instance, especially if a trifle larger tray has been used, the impression will come off in such large pieces that they may very easily be placed back into the same tray, fastened there with a little wax and another model made.

Plaster Impressions and Loose Teeth.

W. Dunn, D.D.S., Florence, Italy, says: When taking plaster impressions, it is often difficult to put a layer of wax all round loose or isolated teeth to prevent their being dragged out. A simple method, where the tooth is fairly even all the way up, is to slip a piece of soft rubber tubing over it, and take plaster impression as usual.

Engine Cord.

The lacing cord for ladies' bicycles, says Dr. Gaylord, in *Dental Cosmos*, to be obtained at bicycle stores, makes admirable engine bands.

Such suggestions are worth much to the active dentist. Haven't you something to tell? Let's have it.

Getting It Down Fine.

A sanitary Bible for use in court-rooms, says the *Medical Record*, has just been put on the market. It is bound with white celluloid, and can be washed.

MACON, GA., Sept. 11, 1897.

MY DEAR DOCTOR:—THE AMERICAN DENTAL WEEKLY, Vol. 1, No. 1, just received.

Any congratulations I could offer would be but faint praise.

The first issue is certainly far beyond my highest expectation. May you meet with the success you deserve.

Most sincerely,

H. H. JOHNSON.

Mentho-phenol for Toothache.

Dr. Schaeffer, in the *Boston Med. and Surg. Journal*, reports the following as admirable for toothache.

R Phenol crystals..... 1 part.
Menthol..... 8 parts.

Melt over a moderate heat. Dr. J. M. Howe says it is excellent. The formula is a good one. The liquid is of amber color, very pungent, but not caustic.

An Old Formula.

The following formula for a gold solder, says Dr. Leffman in the *International Dental Journal*, was written more than sixteen hundred years ago:

"Gold, two parts; copper, one part; melt and granulate. 'If you wish a more brilliant color, add a little silver.'" Do we, in the year of our Lord 1897, know it all?

Her Sister's Teeth.

A woman called on Dr. Stainton, who lives somewhere in New York, and asked him to see what was the matter with her teeth. He saw the plate did not fit and told her so. "No," she said, "they were made for my sister, but she is dead."

Dr. Geo. Allan, of New York, says he has stopped using bichloride of mercury in antral troubles. He thinks it injurious, even to great dilution, to the soft tissues.

ATLANTA DENTAL COLLEGE.

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The next session of the Atlanta Dental College opens October 5th, and continues six months. Entrance of students expires October 15th.

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The Atlanta Dental College devotes its entire time to teaching Dentistry. Its Infirmary rendered services to 8000 patients during the past session.

The College was removed this summer from the old into larger quarters, refitted and refurnished throughout. Has placed in its building new and up-to-date Chemical, Pathological, and Bacteriological Laboratories.

The Atlanta Dental College holds membership in the National Association of Dental Faculties and is recognized by the National Association of Dental Examiners.

For further particulars address

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Hereafter Clinics will be given in Operative Dentistry.

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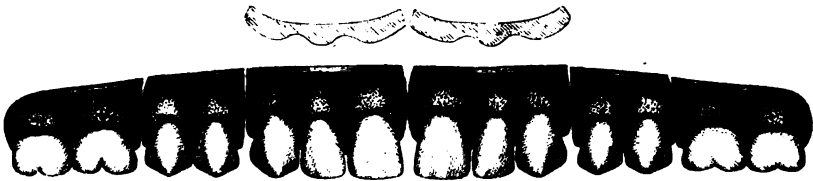
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THE

American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., SEPTEMBER 23, 1897.

NO. 3.

ARTICULATING TEETH.

BY D. D. ATKINSON, D.D.S.,
Brunswick, Ga.

In prosthetic dentistry a correct articulation is of paramount importance. A denture made from a faultless impression will fail if the teeth on one side strike before those of the other. The lower jaw is the only bone in the human anatomy the exercise of whose function is dependent upon its exact relation with another bone with which it is not otherwise articulated. If artificial dentures are not constructed so as to preserve this continuity in the occlusion of the teeth, they will fail of their purpose. To show how to place the models on the articulator properly, so that the teeth will not need to be ground after the plate is finished, so that each tooth will occlude in the finished case in the mouth just as it did on the articulator, is the purpose of this article.

The temporo-maxillary being a double arthrodial articulation permits the greatest latitude in the movement of the mandible.

It is not easy for an edentulous person to close the jaws so that the upper and lower jaws will occupy their natural apposition to each other. However great the difficulty in securing this apposition as refers to the lateral movement and that from before backward, be it remembered that in its vertical movement the mandible always bears a fixed relation to the superior maxilla and cannot be changed, no matter how wide the jaws are opened nor how far the lower jaw

may be drawn to one side. To determine the vertical relation between the two jaws, we will place a sufficiently large lump of softened wax in the mouth and direct that it be closed sufficiently to make a clear impression or indentation in the wax on both sides above and below. It matters not at this time if the bite was too far forward or to either side, the occlusion or vertical position will be correct. Suppose the case to be full upper and lower, we will now proceed. The lump of wax as removed from the mouth is chilled with cold water and trimmed on each side until only the bottoms of the impressions are left. To these the two models must be adjusted, the upper and the lower each on its respective side at the same time and each fastened with molten wax. Let it be certain that the models touch the bottom of the impression in the lump wax bite. In this position they are to be placed in an articulator and fastened, after which the lump wax bite may be cast away. A common articulator which swings like the mandible at the condyle is a splendid instrument for the purpose. Now wax trial plates are to be made with wax rims to represent the teeth, and adjusted to each other on the articulator with a level surface all around. A good way is to make the upper first and chill it in water, then place a warm rim on the lower and close the articulator, having a sheet of wet paper between the two. The articulator may then be opened or closed without impairing the occlusion. It will be found that in placing these wax plates

in the mouth the rims will be in perfect contact all around; but the patient may have closed the lower jaw too far forward or to either side upon the lump of wax in the first instance; if so, it can now be easily detected and corrected by several successive movements of the jaw and noting the correct position of the wax, which will inevitably be shown after a few efforts. This must be well marked on the wax and both removed from the mouth and fastened together in their new position. By adjusting the models to the lump of wax we have the absolutely correct occlusion, and by placing the wax plates in the mouth we have corrected any error in the lateral movement. If the lump wax bite was incorrect it will now be shown, as the wax plates in their corrected position will not fit the position of the models on the articulator. To remedy this take off the upper model from the articulator, place it in the wax plate and reattach it to the articulator. The teeth may now be arranged with an abiding faith that each tooth will strike in the mouth just as it does on the articulator.

For a full upper or lower set separately, the procedure is the same—a model must be made of the opposing teeth and adjusted to the lump wax bite which must have been trimmed until only the bottom of the impression of the alveolar ridge is shown on one side and that of the points of the teeth on the other. In all cases, full or partial, it is best to have a correct model of the opposing teeth. I mean of all the teeth of the opposite jaw.

This principle in obtaining the correct occlusion is exactly illustrated by the principle upon which Dr. How's true bite plates are devised, which I consider very valuable instruments.

Slab for Mixing Cement.

Dr. J. A. Robinson, Morrisville, Vt., says: The porcelain cover of the electric light cut-out, which can be had of different sizes, makes excellent slabs for mixing cement on.

USE AND ABUSE OF CROWNS.

BY HENRY W. GILLETT, D.M.D.
Newport, R. I.

For a year or two back there has been in evidence, as shown by the articles in our dental journals, a tendency towards reaction from the very general use of artificial crowns in cases where other methods of procedure are possible.

It can scarcely be disputed that in the past few years, crown and bridge work has been overdone in the hands of many practitioners, and that many abuses have resulted.

One of the queries in the mind of the writer relates to the position of those who, seeing the evils of this too free use of the convenient and tempting crown, have taken their stand against it, and instead of advocating its intelligent use, express themselves as entirely opposed to its use whenever possible to avoid it. Is this to result in a reaction which shall not only check the acknowledged abuses of the crown, but also produce the lamentable effect of replacing it with much less satisfactory methods in a large proportion of the cases when it is an efficient servant.

Are the "built up, patched, banded and riveted natural teeth" for which a recent writer expresses a preference, to be depended upon to do good service for their owners, or to bring credit to the practitioner who has produced them? Are they to be compared to the well-made, well-fitted and carefully set crown, either for reliable service as masticators or in appearance?

Ought not much of the energy expended by these objectors to the crown, *in toto*, be spent rather in an effort to enforce upon the users the necessity for more care and intelligence in its application, for more careful preliminary preparation of the tissues it depends upon for its support, and which it in turn protects, and for more earnest efforts to so make and apply it, that this protection shall be assured for long periods of time?

The conservative practitioner may well be pardoned for condemning in unmeasured terms many of the abominations masquerading under the name of crowns, where solid molar and bicuspid teeth with ordinary cavities are covered with gold thimbles, without regard to contour or the fit of the band at the neck of the tooth.

The writer has seen such cases when it would seem that the only preparation given the tooth had been a slight grinding of the occlusal surface, and when the selection of the ready-made crown had depended only upon its being large enough to go over the tooth, no regard being paid to contour or to fit. Crowns of this sort can only be considered an injury to their possessors, and it may almost be questioned whether it is preferable that such teeth be left to decay rather than to have the local disease-breeding conditions of such crowns exist.

It seems plausible to suppose that these exhibits of the varying degrees of such conditions as are above referred to are often responsible for the expressions we find in our literature roundly condemning the use of crowns.

Do these writers forget that these ill results are not to be ascribed to the crown itself, but to the utter lack of ability of the practitioner making use of it? Is it better to follow up such exhibits with papers advocating fewer crowns and more patchwork, or should it rather stimulate an advocacy of *better* crowns?

The statement is made that "the crown is a last resort; when it fails, nothing more can be done"—that it is the last possible resource for the preservation of the tooth.

Does the well-fitted crown need to fail? Look up your records and see if (barring breakage of porcelains) even 1 per cent. of the crowns you *know* to have had accurately fitted bands, correct contour and knuckle with adjoining teeth and correct occlusion, have failed from causes that would not equally have affected the same teeth had they been filled instead of crowned.

Look up the records of the crowns that you have seen fail, and see if you do not find those failures largely due to defects that might have been avoided when the crowns were made and set.

Look up the records, also, of your patched, banded and riveted teeth. Do you not find that they have had to be patched again and again; that the rivets and screws have resulted in breakage, compelling the extraction of the broken tooth, or the final placing of a crown on a weak and insecure foundation, when it might just as well have had a good, sound root to support it, had the crown been the first treatment?

Where a useful tooth presents, so weakened by decay that it cannot have its contour and occlusion restored in such a manner as to insure continuance of its usefulness without danger that it will give way under the strain, and possibly in a way to permanently weaken it, can there be any question as to the value of the two procedures—filling or crowning? On the one hand, the anchorage of the filling still further weakens the tooth, and even if set on pins in the canals, all stress applied to the filling tends towards splitting the tooth, and the filling leaves opportunity for renewed decay. On the other hand, if the weakened tooth is shaped properly, the tissue removed at the cervix leaves room for the snugly fitting band with no danger that it will cause irritation, and the great gain is at once made of having a ferrule to unite all the strength of the support in one solid whole. In addition to this, the well set cap prevents further weakening of the support by renewed decay—another point of sufficient value to alone decide the question.

The writer has seen many teeth finally lost because the operator had devoted his efforts, year after year, to keeping them patched up with amalgam, when a suitable crown applied in the beginning would have been less expensive, less exhausting for the

patient, and the tooth and occlusion of other teeth would have been preserved indefinitely.

A recent case of the kind which had been carried on till the operator evidently felt it unsafe to keep the occlusion at all, not only nearly cost the loss of the tooth itself, but impaired the usefulness of the whole side of the mouth by reason of changes in occlusion following the unsatisfactory treatment.

It seems to be a fact borne out by the evidence that many practitioners following this patchwork method soon come to lose sight of everything but the fact that they are keeping the tooth in the mouth. They sacrifice occlusion, approximal contact, and the health of the surrounding gum for the sake of keeping the tooth in place, and then lecture their brethren about their lack of ingenuity in preserving such teeth by filling.

This ingenuity is to be most highly commended so long as it does not sacrifice the usefulness of the tooth and its neighbors, but when its own and their integrity are endangered we submit that some ingenuity should be turned towards the production of as perfect a crown as it is possible to produce, and that such treatment will be of greater service.

One of the deductions from Dr. G. V. Black's work on the "Physical Characters of the Human Teeth" seems to the writer to have a very practical bearing on the practice of crowning, and he has not yet seen it commented upon. Dr. Black speaks in his published paper of the condition of the dentin of pulpless teeth where it has been exposed to the absorption of the fluids of the mouth, by reason of open cavities and pulp chambers; also of this same absorption, even when the pulps are still living, but partially calcified, and the dentin has been exposed on the surface.

While he does not state his conclusion on this point so definitely as we might wish, owing to lack of full tests, his tentative

conclusion so coincides with clinical experience as regards the weakness of dentin which has become discolored through such absorption that it would seem possible to accept it at once.

If the point be accepted that such dentin is very decidedly weakened, its practical bearing must not be overlooked in crown work. Having to determine the treatment desirable for a pulpless tooth, when, by wear, dentin has been uncovered which cannot be protected, or by recession of the gum the dentin of the root is left exposed, the weakness of such dentin must be considered not only as an existing factor, but as a factor which will become *progressively* more important each year.

The writer has frequently felt called upon to make this point the deciding one in favor of crowning, in doubtful cases, lest this progressive weakening should result in such breaking of the tooth as would prevent ultimate crowning.

The writer trusts that nothing he has written will lead to his readers classing him with those who crown everything, with no regard to the good condition of surrounding tissues. He has no language strong enough to express his abhorrence of the results of such malpractice, for malpractice it surely is. He does, however, wish to appeal to those of his brethren who are advocating so strongly the practice of filling as long as anything remains to fill, to consider whether there is not a point short of that where filling should cease, and the principles of *correct* crown work should be applied; to consider whether anything is gained by the patching up of badly broken teeth in such a manner that they must necessarily give way, when they have at hand practical permanency in the shape of a well considered crown.

Date your professional existence from the beginning of THE AMERICAN DENTAL WEEKLY.

DISEASES OF THE MAXILLARY SINUS.

The demonstrations by Drs. Cryer and Fillebrown relating to the maxillary and frontal sinuses have revealed the cause of many failures to cure diseases of the maxillary sinus.

We take pleasure in quoting from an article by Dr. W. C. Barrett, editor of the *Dental Practitioner*, on this important subject:

"Dr. Cryer demonstrated that the usual conception of the antrum was erroneous. In the first place, its opening is not, at least in very many instances, on the lateral border, but is very near its apex. Hence, any attempt to run a probe from the nasal to the antral cavity during life would probably be quite futile.

He showed that the infundibulum in a considerable proportion of instances discharged, not into the meatus of the nose, but into the antrum itself, and that disease of the frontal sinus might readily be mistaken for an affection of the maxillary sinus, in which case all antral treatment must prove quite ineffectual.

Dr. Thomas Fillebrown showed that not only does the infundibulum occasionally discharge into the antrum, but that the canal, instead of ending in the middle meatus of the nasal cavity, normally continues as a half tube, terminating directly in the foramen of the maxillary sinus. He found a fold of mucous membrane serving as a continuation of the unciform process, reaching upward, covering the foramen and forming a pocket which effectually prevented any secretion from the frontal sinus getting into the meatus of the nose, until the antrum and pocket were full to overflowing. A probe directed down through the infundibulum went directly through the antral foramen into its cavity.

These demonstrations might have been anticipated through certain practical facts with which oral surgeons were familiar.

Instances were not infrequent in which the clinical symptoms could not be referred to antral degenerations. These facts entirely modify the treatment necessary in many cases of antral disease.

The writer has opened a large number of antra for patients, and has always found this sufficient for a cure, when coupled with mere disinfection and washing with pure water containing a little common salt, except in cases that he now believes were complicated with degenerations of the frontal sinus and the infundibulum itself. He has not for a number of years inserted a drainage-tube in any case, and believes such a measure inevitably mischievous. A drainage-tube, especially if it be metal, is always an irritant and an impediment to actual and ready drainage. There can be but two possible reasons for its insertion, and both are, we believe, founded in error. In the first place, it is urged that it is necessary to prevent the ingress of saliva or food from the mouth. This is a needless apprehension, and certainly neither would be as injurious as the retention of pus, which a metallic drainage-tube must cause. As good an authority as Dr. Fillebrown urges the insertion of a plug in the tube, to prevent the entrance of air, and "to render the atmospheric conditions normal." He urges that it is not practical to use a canula large enough to syringe through freely, without its allowing the circulation of air, which he says is not a natural condition.

We believe that the circulation of air is normal, and the foramen of the cavity is for the express purpose of connecting it with the external air. Hence the artificial opening should be left unclosed, that drainage may not for a moment be impeded, for the presence of the retained pus, even for the briefest period, is mischievous.

The second reason urged for the insertion of a drainage-tube is to keep the opening patulous. But that is precisely what it does not do. It induces granular formations

about the entrance, which effectually close the tube in many instances. If they should form when the tube is not inserted, they may be cut away and cauterized. That will always be enough for the purpose, provided the opening is of sufficient size, and it should never be less than the caliber of an ordinary lead-pencil. This having been secured, and kept patulous at all times, we believe in every uncomplicated case of empyema of the antrum a cure will result without any other treatment than a few flushings with pure water containing a little salt in solution. Peroxide of hydrogen is not only unnecessary, but it is mischievous. When the opening is at the most dependent portion of the cavity, as it always should be, it is better to wash the pus out than to decompose it with pyrozone solutions. These have no therapeutical effect whatever, and hence are not called for. If a stimulating astringent is eventually needed, a very weak solution of chloride of zinc will be all that is necessary, and the multiplication of remedies is to be avoided.

Of course, if the case is complicated with the presence of foreign bodies, with a diseased condition of the frontal sinus and the infundibulum, or with osseous degenerations, these will demand the separate remedial measures that are called for.

We are far from giving assent to the assertion that decayed teeth are the most fruitful source of disease of the antrum. The root of a live tooth can never penetrate that cavity, for there must intervene the apical pericementum, and this necessarily implies a septum of bone between the tooth and the cavity, without which the pericementum could not exist. Eminences above the root of a tooth may not infrequently be seen in the floor of the antrum, but never an opening with a protruding root. An abscess of a dead root, the apex of which was near the antrum, might break into that cavity, but such instances are not frequent. The assertion of physicians that empyema of the an-

trum is in any considerable proportion of instances due to treatment of dead teeth by dentists will not receive the slightest attention from those really competent to judge.

Diseases of the antrum are especially common in this catarrhal climate, and have their inception in the same train of causes that bring about nasal disturbances. The membrane lining the maxillary sinus is continuous with the Schneiderian membrane, and mere continuity of tissue is sufficient to account for early degenerations. The most common form of antral disease is nothing but an exaggerated nasal catarrh, and the proper time for its treatment is in its early stages, when the ordinary catarrhal symptoms are felt in the maxillary sinus, and they may be recognized by the peculiar pain that is always felt during the suppression of mucous secretions. These are easily recognizable in the nasal cavity in the early stages of coryza, and close observation will detect them in the maxillary and frontal sinuses. When they are first recognized is the proper time to begin the treatment of antral difficulties, by proper medicinal agents, and not through surgical interference.

Plaster Bowls.

Dr. Chupein says in *Dental Office and Laboratory*: The best bowls he has found for mixing plaster are manufactured in Japan. They are procured at nearly all stores which deal in Japanese goods. The reason he has found them better than other bowls is because they are absolutely hemispherical, and they are covered with a peculiar enamel to which the plaster will not adhere. They are about four inches in diameter by about two inches high, and are perfectly plain, with no figuring either in the inside or out of the bowl. To clean these bowls he has found it best to let the remains of the plaster harden in them after use, when, if very hot water be poured into the bowl, the plaster peels off and leaves the bowl absolutely clean.

SURGICAL TREATMENT OF ALVEOLAR ABSCESS.

The persistent and long-continued medicinal treatment of chronic alveolar abscesses is fast becoming a thing of the past with the skillful dental surgeon. Recognizing that in all such cases there is a necrotic condition of the bone, and often of both root and bone, the fallacy of such treatment is seen and the surgical method is rightfully adopted.

Dr. S. H. Guilford speaks well on this subject, in the *Stomatologist*, as follows:

The commonly accepted idea of an alveolar abscess is that of a sac at or near the end of a root which has been formed by the pericementum becoming loosened from the cementum of the root through disease, and whose function has been so changed by pathological causes as to be pyogenic in character. That to restore the parts to health it is only necessary to treat the condition as we would treat an abscess anywhere in the soft tissues of the body; that is, to empty the sac, remove all traces of pus by syringing with water and hydrogen peroxide or pyrozone, and then apply some suitable cauterant and stimulant to alter the character of the secretions of the inclosing membrane.

It must be borne in mind, however, that an alveolar abscess differs radically from one confined to the soft tissues alone, in that it is so surrounded and inclosed by bony tissues that this latter becomes readily affected and destruction of its substance supervenes.

When the necrosis occurs, as it does in all or nearly all cases of alveolar abscess of long standing, we have a complication that medicaments alone cannot possibly relieve. To effect a cure, the diseased bone must necessarily first be removed, after which medicaments or possibly the recuperative processes of nature alone, aided by antiseptic treatment, will bring about the desired result.

It is a very simple operation to lance the

gum over the seat of the disease, drill through the process to the root apex, and then, with a round bur of sufficient size, cut off the apical end of the root and remove as much of the adjacent alveolar tissue as may seem to be affected. Previous to doing this the root should be permanently filled, for it cannot be done so well afterward. After the operation it is only necessary to wash the cavity well to remove all debris, pack with iodoform gauze, and leave the result to the kind hand of nature.

This treatment of persistent alveolar abscess is radical, but it is also simple, and in the light of our present knowledge is the only rational method of treatment in cases of this character. Although it has not yet become a common practice, it is growing in favor, and with those who do employ it, is followed by the most satisfactory results.

The day for long, fruitless treatment of cases of alveolar abscess, which, by their obstinate resistance to medical treatment, plainly indicate necrotic associations, is past, and the sooner this is recognized the better it will be for both patient and operator.

Small Glasses for the Operating-Table.

Glasses holding about three ounces, known as whisky glasses, and which cost but little, by the dozen, are the most convenient for the operating-table. A clean glass should be used for each patient. To hold them against being knocked over, make a circular clamp of a piece of brass hooping, bent and shaped to accommodate about one inch of the bottom of the glass, and fasten this to the side of the operating-table.

Treating Teeth with Silver Nitrate.

When treating caries or erosion with nitrate of silver, apply the silver solution and immediately place in the cavity some amalgam filings. These, with the silver, form an insoluble black coating immediately.

Diagnosis for Conserving the Pulp.

Dr. J. Y. Crawford speaks very interestingly on this subject, and his method is worthy of consideration: Put on the rubber dam, dry the cavity and remove the decay; note carefully the entire field of dentine exposed by decay and your operative procedure; if the dentine is hypersensitive or normally sensitive throughout the entire field, you may hope to conserve the vitality of the pulp, unless something is wrong in your operative procedure. But if in the corner nearest the point of exposure the dentine shows opacity and is not sensitive on that side, while it is sensitive in other portions, you may know that that side has been profoundly impressed by the onslaught of inflammation; that that portion of the pulp is not performing its functions. Get blood at the point of exposure, and as the inflammation is reduced, you will note the dentine becoming more and more sensitive. This is a point of the greatest importance in deciding whether or not to try and save the pulp alive. The contents of the tubules may be only paralyzed and temporarily inactive, but if you fail to get a ready response, as above, it is more prudent to wait, but if there is no degenerated portion of the pulp you may hope that nature will resume her functions; that you may get the mastery of the disease—convalescence—recovery, and the vitality of the tooth be preserved as though the pulp had never been exposed.

Acetylene Has a Rival.

The new illuminant—acetylene—has now a rival, to which the name of Eureka gas has been given. This gas, says *Invention*, is the invention of Mr. Hector de Fazi, of Montefiascone, Italy. It is said to be obtained as follows: Lime as pure as possible is employed as a base, colophony and calcium carbide being added. One thousand parts of the mixture ready for use consists of 900 of quicklime, 50 of colophony and

50 of calcium carbide. There is said to be no fear of explosion by mixing with air, no heating of water and no special burner needed. One thousand parts of the mixture give sixty liters of gas at a pressure of thirty-five millimeters of water. The photometric intensity of the flame is stated to be 92.4 candle power, and the same amount of calcium carbide employed singly would only give 18 candle power. It is claimed that Eureka gas is 50 per cent. cheaper than acetylene, or that at equal cost it will give half as much more light.

Strop for Burnishers, Spatulas, etc.

Dr. Gordon White, of Nashville, makes a strop for burnishers, spatulas, etc., by gashing a thick piece of sole-leather and filling with pumice-stone. With this strop the instruments named can be easily polished.

Receptacle for Dirty Burs.

Take any suitable small vessel, cup or box, nearly as deep as the length of an engine bur, fill it nearly full with small shot. When using the engine burs, instead of laying the used or dirty ones on the table, stick them in the shot. It keeps them bright so far as the shank is concerned, and the office attendant knows that all burs in the shot have been used and are to be cleaned. JAMES G. PALMER.

New York.

Holder for Engine Burs.

Dr. J. A. Robinson, Morrisville, Vt., says: A glass toothpick holder is filled half full of plaster over which is placed a disk of rubber dam. This holder sits on the operating-table and makes a convenient receptacle for burs.

Sodium and potassium, both solids, will, if united, form a liquid alloy.

THE
American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

EDITOR:

B. H. CATCHING, D.D.S.

FRED. BRONSON, D.D.S., Editor of the German and French.

Subscription \$2.00 per year; \$1.00 for six months—including Canada and Mexico; other countries \$3.00 per year.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, September 23, 1897.

NEED OF MENTAL ACTIVITY.

Dr. Wattle never wrote better than when he wrote the following: Information does not necessarily lead to thought. The amassing of facts does not in itself give a man wisdom or knowledge, any more than the ownership of a marble quarry gives a man a palace for a residence. Facts can be a help to thought, and they are of service to one who uses them in his thinking; but many a man who has a small store of acquired information does more wise thinking than many another who has filled his mind or his memory with facts or data without knowing what to do with them. There are students who, like European couriers or Oriental dragomans, have learned to speak in a dozen languages without being able to think in one. Mental activity is not usually correspondent with the acquisition of the mere facts of knowledge; yet mental activity is essential to wise thinking. What a student learns in college is of little practical value unless he learns to think independently when out of college. That which he studies in college is at the best but the raw material to be worked up in his own mind. Robert Leighton said of

many students of theology in his day, that, when they left the university they carried grass on their backs instead of wool; and so it is of many a university man nowadays; he has but obtained material which he may or may not work up into a valuable product through his independent mental activities. The true measure of our intellectual power is in our independent mental control and use of our acquisitions of knowledge, not in what we have obtained or even the most important information which we do not know what to do with.

PERIODONTITIS AND ALVEOLAR ABSCESS.

In writing a prize essay on "Complications That May Arise from Carious Lower Molars," F. J. Padgett, L.D.S., in speaking on periodontitis, its pathology, symptoms and treatment, says in the *British Journal Dental Science*:

Local periodontitis may be acute or chronic. Acute cases may be considered those which terminate in suppuration; chronic cases those in which suppuration does not take place, excepting, may be, at the line where the gum and periosteum meet.

Acute Local Periodontitis.—As a concomitant of dental caries, its origin is probably due to the direct absorption by the periosteum of septic material from a putrid pulp; it may also arise by inflammation spreading from a living inflamed pulp. Coleman states that the septic material may possibly influence the periosteum through the dentine and cementum, whilst others have supposed that it may affect the membrane through the vessels which supply both the pulp and the periosteum.

Pathology.—Seeing how closely the pathological changes occurring in periodontitis are connected with those of alveolar abscess, I shall include here the pathology of both. First, the vessels at the irritated spot dilate, then, after a longer or shorter interval, the

blood-current in the vessels slackens; whilst without the limits of the area of irritation the vessels are dilated and more than normally active. Thus the periosteum becomes congested and swollen, but this swelling can only be effected by raising the tooth. Hence the apparent lengthening of the tooth. Many blood corpuscles, chiefly leucocytes, now pass through the vessel walls (*diapedesis*), whilst finally the vessels become so crowded and blocked that the stream stops, and *stasis* is said to have occurred. When free the cells travel towards the irritated-spots by aid of their ameboid contractility, the softening changes in the surrounding connective tissues rendering their passage more easy. Liquor sanguinis passes out with the corpuscles and forms the inflammatory effusion. Now if the irritation be not too long continued or too severe in character, and the periosteum be not lowered in vitality, the truant leucocytes and serum may be carried off by the lymphatics, and the inflammation thus end by *resolution*. But if this be not the case a further series of changes takes place. At the spots of chief irritation a rapid cell proliferation occurs, accompanied by a similar proliferation of the cells of the adjacent connective tissue. But there is another agent at work. The tissue becomes invaded by pathogenic micro-organisms, and these the leucocytes attempt to devour (*phagocytosis*). Many of the leucocytes, however, perish, forming the *pus cells*. On the other hand, the micro-organisms, probably by the poisons they secrete—known as ptomaines—produce a peptonizing action on the leucocytes and neighboring tissue, causing a liquefaction, the resulting fluid forming *pus*. This is *suppuration*, and it is this area of liquefaction which, when circumscribed, we call an *abscess*. In the process the bone may be partly absorbed and penetrated, when the pressure of the mass of cells readily distends the softer tissues. A continuance of the process causes a like breaking down toward

the surface; at last the epithelial covering only is left, this speedily gives way and the pus is evacuated.

Symptoms.—In the first stage the tooth feels uneasy, but pressure brings relief, since the blood is thereby forced from the dilated vessels of the periosteum. In the next stage the tooth is still further raised in its socket and is slightly loose, whilst the gum in its neighborhood becomes swollen and tender, and the free margin assumes a deep red color. The pain is of a dull, constant, gnawing character, and pressure is now unbearable. This is due to the fact that the serum has passed out of the vessels into the surrounding tissue, whilst the vessels are in a condition of stasis; hence biting on the tooth can no longer empty the vessels of surplus blood, but causes abnormal pressure on the nerves. The disease is usually accompanied by a certain amount of febrile disturbance.

Treatment.—The application of counter-irritants, of which equal parts of tincture of iodine (double strength) and Fleming's tincture of aconite is perhaps the favorite. Many prefer the liniment of iodine to the tincture. Capsicum plasters are convenient and useful. Local blood-letting often gives relief, or a pad of blotting paper soaked in a 10 per cent. solution of cocaine hydrochlor. and held against the gum is sometimes of service. Hot water or poppy-head fomentations held inside the mouth may reduce the inflammation. If the inflammation is due to a putrid pulp, the pulp-chamber and canals must be cleared, treated antiseptically, and filled. If the cause be a living, inflamed pulp, it will probably be necessary to first devitalize the pulp. The tooth should be removed if of no value. A saline purge, followed by tonics, is the general treatment indicated.

Chronic Local Periodontitis.—This may be merely the condition left after the acute form has passed off, or may be the result of a dead pulp. The symptoms will be similar

to those of the acute form, though less intense. The gum will appear thick and red at its margin round the affected tooth, shrunk from its attachment, and the alveolus beneath absorbed, so that the tooth will gradually loosen and fall out. On extraction the tooth generally brings away with it a part of the alveolo-dental membrane, which is seen to be thickened, of a dark red color, and emitting an offensive odor. Dental exostosis and inostosis are common results of chronic periodontitis.

Treatment to be followed is the application of counter-irritants, or local depletion, careful removal of pulp with antiseptic treatment, and filling the tooth. If the case affords evidence of being complicated by exostosis the treatment must invariably be extraction.

In alveolar abscess he says the immediate cause is periodontitis. The pathological changes have already been described.

The mischief begins at the apex of one or both of the roots of the carious molar by an effusion of plastic material, around which, according to Salter, a little cavity is formed by the absorption of the alveolus. This effusion of lymph becomes condensed into a sac, within which pus is formed; so that it occasionally happens that on extracting the peccant tooth, the sac and abscess are brought away with it. Salter observes that the sac is generally attached to that root on the side towards which the tooth is most decayed. So soon as matter is actually formed rapid absorption of the surrounding bone takes place, and the pus makes for the surface, finding an exit either at the outer surface of the jaw at a point corresponding horizontally with the extremity of the root and piercing the gum within the mouth, or by perforating the socket and burrowing in the soft tissues points externally. Whether the abscess points within the mouth or externally is in many instances determined by the relative length of the roots and the depth of the sulcus. Some-

times the pus finds vent for itself by a gutter along the course of the root, the matter being discharged at the neck of the tooth, but this very rarely happens in the case of molars.

Symptoms.—In acute alveolar abscess these will be similar to those of acute periodontitis, though much intensified. The tooth will be raised in its socket, loose, and very sensitive to pressure, the gums around it swollen, deeply congested, and soft or even boggy to the touch if pus has infiltrated the surrounding tissue. The sulcus instead of being concave is pushed up so as to be convex. In cases where the swelling is less diffused the gun over the apex becomes globular in shape. In the stage during the formation of pus and the absorption of its bony casing, the swelling will be comparatively slight, but pain will be intense, and of a dull throbbing character. After the pus has made an exit through the bone the pain will be greatly relieved as the pressure is reduced, but the swelling becomes rapidly larger.

In chronic cases the patients usually experience but little pain, and hence do not seek relief. The size of the swelling fluctuates, generally increasing at night. Chronic abscesses sometimes exist several years with little or no evident inconvenience.

In acute cases general symptoms of fever are to be found. There are a quickened pulse, elevated temperature, and generally a thickly-furred tongue, scanty and high-colored urine, and the skin hot and dry. In more chronic cases general symptoms are usually practically absent.

Diagnosis.—There are several errors to guard against. On the one hand, as Salter has well pointed out, surgeons are apt to mistake alveolar abscess when involving the integument of the face for diseased bone, etc., whilst on the other hand dentists are apt to attribute to carious teeth morbid conditions which have been coincident with

though not produced by them. It is important to differentiate alveolar abscess leading to infection of the submaxillary lymphatic glands from enlargement of these glands arising from purely constitutional causes, as is not infrequent in strumous subjects. Another difficulty arises when the abscess forms in the substance of the jaw, leading to the bulging of the outer and inner alveolar walls, when it may be mistaken for a tumor.

Treatment.—When the abscess threatens to burst externally the tooth should be immediately removed. This is particularly necessary in the case of lower molars, since gravitation of pus with the formation of a sinus opening externally is so liable to occur. In addition to the extraction it is advisable to make a vertical incision between the cheek and the jaw, else the matter is apt to pocket and cause progressive absorption to the surface, and though the tooth be removed the abscess may thus still open externally. If outward pointing is feared the skin may be supported externally by a pad of teased out cotton soaked in collodion. Where the collection of pus is very large an incision should invariably be made, and also in those cases where the pus does not find a ready exit through the socket. The radical treatment is generally called for when the pus is welling up by the side of the tooth, and when the symptoms are severe. If the abscess has invaded the substance of the jaw the tooth must be removed and the pus evacuated.

The conservative treatment consists in incising the swelling within the mouth, (taking care to keep the cutting edge of the knife directed towards the bone to avoid wounding the facial artery), removing the putrid pulp of the diseased tooth, treating it with antiseptics and filling it. In some cases, as when the abscess is deep-seated, the absorption of the bony wall must be hastened, which may be done by constant poulticing of the gum over the region of

the tooth by means of toasted fig, etc., or a more immediate result may be obtained, as Tones suggests, by thrusting a short double-edged scalpel down to, and if possible, through the spongy bone overlying the abscess sac. Rhizodontrophy may be resorted to as a palliative treatment.

A saline purge should be prescribed, followed by a course of tonic treatment.

Dental Fistula.—Alveolar abscess is usually a trifling matter as regards its ultimate consequences, but occasionally it becomes a serious malady, and inasmuch as the teeth which produce the most serious results are the lower molars, especially the third, they become of particular interest. The tendency of the suppurative products in these cases is downwards, and there is more danger of an external opening being formed than from any other teeth. The opening from the lower molars is generally somewhere below the attachment of the buccinator, the angle of the jaw being the usual spot at which abscesses from the wisdom teeth open. When an alveolar abscess opens externally, directly the first inflammatory swelling subsides, contraction between the skin and the suppurating part commences, and the integument is drawn down into a more or less funnel-shaped cavity, at the deepest part of which is usually situated a little mamilla of red granulations, giving forth pus from its fistulous point. It is an unsightly appearance only to be exchanged, when the causing tooth is removed, for a deeper depression starred in its center by a cicatrix. Sometimes the lip of granulations becomes elongated into a papilla and is covered with cuticle. Salter mentions one more than half an inch long, whilst Heath records a case where this condition gave rise to the idea that the growth was a horn! It is interesting to note that Bell describes these growths round fistulous orifices as small tumors.

Treatment.—Remove the causing tooth.

If this be not done there is scarcely any chance of the fistula healing. The fistula may then be syringed with antiseptics. Sometimes a sinus which has long been permitted to exist is apt to discharge long after the removal of the tooth. Bell relates an interesting case of this kind produced by an abscess from a lower wisdom tooth. Here the fistulous opening was so complete that a part of any fluid taken into the mouth passed readily to the outside of the cheek, and which did not unite even on removing part of the parieties of the fistula.

FORMALDEHYDE.

As this germicide is now exciting much interest on account of the yellow fever scare, the following article by chemist Edgar Everhart, taken from the *Atlanta Journal*, may prove of interest. He says:

In view of the present yellow fever panic and of the interest excited by any agent that can lessen its spread, it might be of importance for the public to know something of the new germicide formaldehyde, which is now about to be extensively used.

Formaldehyde belongs to a class of chemical compounds called aldehydes, and it got its specific name from its close connection with formic acid, a substance found in the bodies of ants. Chemically speaking, it is intermediate in composition between methyl alcohol (wood spirits) and formic acid, and may be prepared by the oxidation of the former or by the reduction (deoxidation) of the latter. It has never been prepared pure because of its unstable character. The discoverer of formaldehyde was A. W. Hofmann, formerly professor of chemistry at King's College, London, and more recently of the University of Berlin, one of the greatest of modern chemists.

Hofmann's method of preparation was substantially the same as now employed by the government, namely, by the heating of a mixture of air and methyl alcohol in con-

tact with metallic platinum. The more finely divided the platinum the better the results, and hence the use of platinized asbestos, which is nothing more than the impregnation of asbestos with platinum in a very finely divided state.

The unstable character of formaldehyde is the cause of its wonderful properties. It unites with avidity with oxygen, even when combined in other substances, thus destroying the integrity of those substances and being itself changed (oxidized) to formic acid. Upon "germs" its action is fatal. It irritates the eyes and nose and throat of human beings, but whether it is particularly poisonous or not is doubtful.

As a germicide and disinfectant its action is analogous to sulphurous acid, though it is much more powerful. In energy it approximates that of chlorine, which latter substance can rarely be used on account of its destructive qualities on most all fabrics. Chlorine is without doubt the most powerful germicide known. It destroys germs in contact with moisture by oxidizing them, while formaldehyde destroys the same germs by withdrawing oxygen from them. Finally formaldehyde has practically no influence on textile fabrics, and like all gases can permeate all spaces that are accessible to air.

A Help for Insomnia.

Dr. James Truman thinks to give the stomach something to do gives the brain rest. He says:

It is a well known fact that a "drowsy" feeling usually follows a hearty dinner. This is accounted for by so large a part of the blood of the system being called to the stomach to aid in digestion, leaving the brain poorly supplied. The writer has for a number of years partaken of a light but wholesome lunch before retiring, and after a day filled with various duties, and the evening occupied with literary and other labors, he always finds ready and restful sleep following the midnight lunch.

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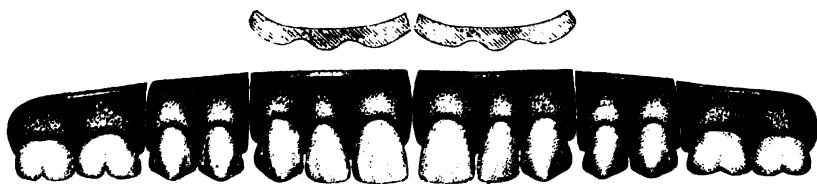
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VOL. I.

ATLANTA, GA., SEPTEMBER 30, 1897.

NO. 4.

CATAPHORESIS.*

BY THOMAS B. HINMAN, D.D.S.,
Atlanta, Ga.

Mr. President and Members of the Georgia State Dental Society:

The great cataphoretic wave that has swept the country in the last twelve months has left behind it many relics, and I might say a good deal of money in the pockets of the manufacturers, and has gained very little of the filthy lucre for the dentists. My experience with cataphoresis dates back about eight months, and has not been a series of glorious successes as many will have you to believe has been the case with them. I will say, however, that I believe cataphoresis is a great step in the right direction, and that it has come with us to stay. It has many objections, one being the time consumed in the application; another the small amount of cases to which it is applicable. I will relate a few of the inapplicable cases as follows: Teeth that have been previously filled with amalgam or cement; the layer underneath these fillings gives a very decided resistance to the penetration of the electricity and cocaine, and it is impossible in the majority of cases to produce any anesthesia whatever. This is caused by the fact that the dentinal tubes alone convey the cocaine, and the intertubular substance does not in any manner become subject to its action. Now we know that the tubuli become obliterated to a great extent under these fillings, and

those that do remain are so filled with fresh deposit and the metallic salts of the amalgam, that they do not readily transmit the electric current. This has been thoroughly proven by a series of experiments shown me by a friend of mine, Dr. Sontag, of Texas. The experiments were carried out in the following manner: A freshly extracted tooth was carried to a wet sponge which represented, as near as possible, the tissues from which the tooth was taken. To this sponge was attached the negative pole of the battery. In the cavity of the tooth was placed the cocaine, which was colored with methyl-violet, and the positive pole placed in the cavity. The current then being turned on and allowed to remain a sufficient time to produce a thorough penetration of the cocaine. The tooth was then taken and ground very thin, for microscopic purposes, and embedded in balsam under a cover-glass. When examined under the microscope it was found that the blue coloring matter penetrated the tubuli alone, not making any impression whatever on the intertubular substance. In cases where the tooth had been previously filled no penetration was observed whatever, and in cases where large masses of decay were allowed to remain during the application of the electric current no penetration was found. In cases, however, where the layer of hardened dentine was removed, or the decayed dentine was taken from the cavity, a ready penetration of the coloring matter was observed. These experiments were of great interest, and I am

* Read before the Georgia Dental Society.

trying to get Dr. Sontag to make the demonstration before the Southern Dental Association this year.

Wherever cataphoresis is attempted a complete isolation of the tooth is absolutely necessary, and if the approximal surface of a tooth is to be filled, and the corresponding approximal surface of an adjoining tooth contains a metallic filling, anesthesia can only be secured by the placing of the rubber dam over one tooth only, and of course the application of a separator or clamp is absolutely out of the question, as this would at once attract the electric current and completely divert it from its purpose.

Now I will relate a few cases to which it is applicable: Coronal cavities in the molars that have never been filled; labial cavities, and some approximal cavities. In coronal cavities of the molars it works especially well, as you can completely isolate the tooth, and also prevent an overflow of the cocaine. I might say that wherever you can completely control your cavity you will be more certain of good results. I have found that fresh cocaine crystals placed in the cavity, and then a pledget of cotton, moistened with water, placed in upon the crystals in the cavity, has given me decidedly the best results; for, as you all know, solutions of cocaine are very, very unreliable, and guaiacocaine has not given me nearly so good results as pure cocaine, used in the manner thus spoken of. In the handling of cocaine, great care should be taken to prevent its seeping in the mouth, for if a very small quantity of it be swallowed by the patient, extremely dangerous results are liable to occur, and I would not advise the use of cocaine, applied by cataphoresis, for the extraction of teeth.

Now a word as to the instrument: No instrument, except those controlled by a battery, are at all applicable for cataphoresis, as the currents which come from the street circuit are so variable that they produce a great deal of pain and a minimum

amount of benefit. The simplest instrument possible is the best, and I have been using the McIntosh.

In conclusion I will say that I think the ideal instrument has yet to be made, and that within the coming year we will see great improvements in cataphoresis.

EXPERIMENTAL PRACTICE WITH GOOD RESULTS.

BY B. F. ARRINGTON, D.D.S.,
Goldsboro, N. C.

For the encouragement of any who may feel disposed to side-track a little, and experiment for results, I will relate a few cases of office practice. And will say just here, to young men in the profession, that there is but little lost, and often much gained, by experimenting. It is the safest and surest basis for progress and lifting out of old ruts.

As far back as thirty-five years ago a penniless boy about eighteen years of age called at my office to have some teeth extracted and some filled. For one of his age, the extent of decay was extreme. I extracted three or four teeth and filled six or eight cavities with amalgam. All of the lower front teeth were so decayed, approximal and labial surface from margin of gum to cutting edge of teeth, I could not successfully fill them, even with amalgam. I suggested and advised gratuitous experimental treatment and to take the chances for good or evil results. The advice was sanctioned and I proceeded to treat as follows: filed chiseled and made smooth the affected surfaces as best I could, then with cotton twirled on point of stick, applied dilute sul. acid, followed with stick, pumice and water, then dried and applied creosote with cotton twirled on a small bur drill, washed thoroughly and applied to the entire dressed surface scraped nitrate of silver. This treatment was repeated three times in six days, and patient dismissed with instructions

to use tooth-brush with a small quantity of pulv. pumice twice daily (morning and night) for two weeks, and return for inspection. The instructions were carried out and upon careful inspection there were evidence and promise of good results. All sensitiveness (very acute when treatment was commenced) had abated, and the brush could be used freely without the slightest discomfort. Patient was dismissed and was not seen again for more than ten years, when to my agreeable surprise I found the teeth in a perfect state of preservation and presenting a very creditable appearance.

I afterwards treated several corresponding cases in like manner with quite as satisfactory results, and will mention one which I have seen very recently. A man more than thirty years of age, one who loved the dollar more than he prized his teeth, consulted me fourteen years ago to know what could be done for the preservation of his teeth, and what it would cost. I made a careful examination and specified what would be a moderate charge. He decided to have several of the worst cavities filled with amalgam. After I had completed the operations, he wanted to know if I could not do something to improve the appearance and check decay of the right superior canine and first bicuspid, both badly decayed and unsightly. I concluded it was a good case for again testing the combination treatment above stated. I proceeded as in former cases, giving instructions as to use of brush, and dismissed patient. Two weeks ago we met again and I was pleased to find the teeth in a fair state of preservation, no increase of decay and the treated surface was perfectly smooth, and not the slightest sensation from heat or cold.

The question arises, could not many teeth be thus treated and preserved at much less cost to the patient than filling even with cheapest material?

In London an X-ray syndicate has been formed with a capital of half a million dollars.

QUICK AND SAFE MEANS TO OBTUND SENSIBILITY OF THE LOWER ANTERIOR PORTION OF THE SUPERIOR MAXILLA.

BY H. H. SCHUHMAN, M.D., D.D.S.,
Chicago, Ill.

After my experience with the Rhinologist some time ago I decided to experiment a little with cocaine applications in the nose prior to performing operations on the upper anterior teeth. Results from some of these experiments I am sure will be of interest to your readers, although possibly not new to all. I will give them as concisely as I know how. By applying a ten or fifteen per cent. solution of cocaine into the meatus of the nose, for from five to eight minutes, you will find the gingival margins around the superior centrals, laterals and cuspids so anesthetized that a ligature can be passed as high up as may be wanted, or a cervical clamp put on to expose a very high labial cavity without any inconvenience to the patient. That also the malleting of large gold fillings can be done with hardly any irritation to the periodontal membrane. Either immediate or slow separation can be done without pain; pyorrhea pockets and abscess cavities cleaned out, cut or cauterized, without infliction of the usual suffering; even the dentine of the teeth themselves seems to be greatly benumbed. Where for the purpose of making bridge work it may be deemed advisable to destroy the pulps of any of these anterior teeth, and in all preliminary work, including the starting of a cavity in these otherwise sound teeth in order to apply the cataphoric obtunder for removal of nerve, this means of anesthesia will be found of great assistance. In fact, for almost any work on the anterior teeth, whether the cataphoric obtunder is used or not, the application of cocaine in the nose will be found of great assistance to both patient and operator.

RIGGS DISEASE.

BY HOWARD T. STEWART, D.D.S.,
Greenville, Miss.

The question "How do you treat Riggs disease?" is often heard. Knowing something of Dr. Stewart's reputation, we take pleasure in making extracts from his paper read at the Mississippi meeting and published in the *Dental Headlight*:

"We have appealed to science in vain for a satisfactory solution of this question, and now, after years of almost incalculable labor, of experiment and investigation, our knowledge of the etiology of this disease, we are forced to admit, is limited indeed, and our treatment largely empirical. However, notwithstanding all this, I would not be understood to say that we are no more successful in our treatment than our forefathers of a century ago; for we have more remedies at our command, and instruments so superior to theirs that no comparison is to be made. Neither do I mean to convey the idea that the disease is incurable—by no means! And on this point I am aware that I disagree with Dr. Clements, than whom there is probably no better-posted man on Riggs disease in this country. Now I shall not take up your time in discussing unsettled theories, but shall endeavor to give you in as concise a way as possible my own method of dealing with this disease, just as we have to do in every-day practice.

Whatever the cause (whether local or systemic, whether associated with salivary or serumal calculus or with none at all, whether the pockets be deep and easily penetrated or the sensitive gum adheres firmly to the tooth, whether pus be noticeable or not, whether the teeth be loose or firm), the treatment is virtually the same—viz., a thorough breaking up of the diseased tissue and removal of deposits; making a stimulating and solvent application, and protecting the pockets from the ingress of micro-organ-

isms until nature has a chance to establish a healthy condition.

Aside from constitutional considerations, the innumerable modes of procedure constantly advocated nearly all amount to one and the same thing, and one's success depends not so much on the peculiar mode of treatment he adopts as on the thoroughness and skill with which he applies that treatment; and the object of this paper is simply to give a few practical points to aid in applying old treatments. We will now enter more into the details of practical work.

We first obtain the consent and the cooperation of the patient, which is by no means always an easy task. Suppose several teeth are seriously affected, calculus is abundantly present, and the gums highly inflamed and bleeding at every touch. Oftentimes the condition is accompanied by a very offensive breath. If it be so in this case, we first lower the window, open the door, and serve the patient a refreshing glass of a pretty healthy solution of permanganate of potash; this for our own self-protection. All visible calculus is then removed, and the patient dismissed for several days, with the following prescription:

R. Acidi tannici 3 ij.
Acidi carbolic. gtt. xxx.
Glycerinæ 3 j.
Aque, q. s. 3 viij.

M. Sig. Mouth wash three times daily.

This simply gets things in shape to begin work, which we do in right good earnest at the next sitting. I have no confidence in any except the most heroic treatment, and much care is to be exercised at this first sitting if you ever expect to see your patient again.

So the first step is to inject with the hypodermic syringe a small quantity of a one per cent. solution of cocain. The mere external application of either the water or alcohol solution is totally inefficient for the operation which is to follow. Next we insert a suitable scraper (and I will say here that I find little use for a *scaler* under the

gum; I want a *scraper*) to the bottom of the pocket (no further, just at present); and scrape the cementum thoroughly. So far we have scraped only *within the pocket*, in order to avoid bleeding up to this time. Next comes what I consider the most important part of the treatment, and you will observe that just at this point a most essential difference exists between this and the usual modes. A thin, flexible chisel-shaped lancet (this lancet is three-edged, cutting on the point and sides) is now deftly carried toward the apex to a considerable depth beyond the bottom of the pocket; then, still holding lancet firmly against the side of the root carry it all the way around the tooth (if the pocket extends all or nearly all around), thus separating the gum entirely from the tooth. If no discoverable pocket be present, the lancet is just as freely used. The effective use of this instrument usually obviates the difficulty of treating cases where "galleries," as Dr. Cravens calls them are present. Now this operation, under the influence of the cocain (or eucain, which I prefer), is absolutely painless, and gives us free access to the root, which we proceed to scrape and chisel heroically all around, especially about the part covered by the pocket. This is not to be merely scraped sufficiently to remove the tartar, but the thickened and congested membrane should be completely torn away, and no harm whatever is done if the cementum itself is removed to a considerable depth; in fact, a speedy and permanent cure is impossible unless this is done.

In addition to this the overlying gum is to be thoroughly lacerated. You will notice that the inside of the gum over the pockets is less sensitive than the outside—that is, the outer surface is more sensitive to a wound than the inner surface lying against the tooth. This is because of a tough lining tissue which has been thrown up to protect the gum from the pus. Cravens speaks of this surface of the gum as be-

ing "glazed"—a very happy word. This is freely lacerated and torn away to induce new granulation and a reunion of the gum with the tooth. During this process the pockets are to be repeatedly and forcibly syringed out with hot water into which a few crystals of permanganate of potash have been dropped, or with hot water alone, as it is the force to throw out *débris* we are now after, and not medication. For this purpose it is necessary to have smaller and different-shaped points than those that come with the ordinary syringe. The dental manufacturing companies will make them for you, or you can make them yourself, in this manner: Pull through your draw-plate a small piece of German silver plate, as in making the ordinary joint wire for regulating appliances, until you get the size tube you want for a nozzle. Uniting this along the seam with a tiny bit of silver solder, you have a point you can bend into any shape and cut to any length you want. Next take an ordinary straight point that comes with the brass syringe and cut it off until your point will just slip in. You can also ream out your receiving point with the engine; then unite this with a very small quantity of solder, and you have it. The point should be bent nearly to a right angle, and should be quite long, to enable you to reach to the bottom of any pocket in any position.

Now this surgical work is no easy task, and can not be done in a short time. As a usual thing two teeth are enough to operate on at one sitting, this requiring from one to two hours' time. It is foolish to attempt to operate on half a dozen teeth at one time and do it thoroughly; you can not do it!

This part of the work being completed, a solution of permanganate of potash (twenty grains to the ounce of water) is injected into the pockets with a Dunn syringe. In a few minutes this is followed by a fifty per cent. solution of the commercial sulfuric acid introduced on a quill or orange wood.

This strong solution is used for its solvent action on the *cementum* itself, and not to remove tartar. Tartar can not be removed that way; this must have been removed mechanically in the preceding surgical operation. If a Dunn syringe is used to convey the acid into the pockets, a twenty per cent. solution is used, being careful to protect the enamel as much as possible from the overflow. Sometimes this is done first and the fifty per cent. solution used a few minutes later.

Protecting the pockets from saliva, we now flow over them a protective covering made of the following, which is the formula of Dr. E. C. Kirk:

Shellac.....	℥ ix.
Benzoin.....	℥ iiss.
Balsam tolu.....	℥ iiss.
Carbolic acid.....	℥ iij.
Oil cinnamon.....	℥ iss.
Saccharin.....	℥ iss.
Alcohol, q. s.....	℥ ij.

Now with the chip-blower or hot-air syringe the alcohol is quickly evaporated, leaving a covering that will protect the pockets for several days. The patient is instructed not to use toothpick or brush, and is dismissed with this prescription:

R Potassii permanganatis.....gr. viij.
 Aquæ.....℥ viij.
 Sig. Rinse mouth every two hours.

On the constant use of this wash depends, in a great measure, the success of the treatment, and it is to be continued for several weeks, sometimes months.

In addition to this, the tannic acid wash prescribed in the beginning of the treatment is also to be continued three times daily. This astringent wash is for a twofold purpose: (1) to relieve inflammation and (2) to constrict the loosened gum and hold it tightly against the tooth until reunion takes place.

From the use of the permanganate of potash wash I have had much satisfaction. It is old-fashioned, but it is good. For it is sometimes substituted hydronaphthol, lis-

terine or pasteurine, all of which are excellent. For injecting the pockets I have abandoned the bichlorid of mercury, as it seems to retard rather than aid the healing process. It is destructive of cell tissue, and its effects seem to be very lasting in this respect within the pockets, leaving the tissues in a sluggish condition.

There is a new preparation called lactate of silver, which, if it is all its advocates claim for it, would be an ideal drug in the treatment of Riggs disease, both for injection of the pockets and for a wash.

But to return. The prescription for the washes completes the treatment. There is no secondary treatment at the chair, the constant use of these washes being all that is now necessary. I mean, of course, for the teeth that have been operated on. No further attention is given to them now for one month, when they are examined; and if any one of them is not doing well, the same treatment is simply repeated on that particular tooth, scraping (or even burring with the engine) away the outside layer of the *cementum* and again applying the acid and protective covering.

Sometimes the most effective way to tighten a stubbornly loose tooth is to devitalize, remove the nerve, ream out the root-canal, and treat it from the inside as well as the outside.

Ream out the root-canal freely—little danger of making the walls too thin; we want them thin. Now with a very small drill (made by grinding the shank of a broken Gates Glidden drill to a chisel shape) go through the apex. Follow up with the smallest size Gates Glidden, then the next and the next, until you have a free opening through the root and have the tissues bleeding freely. Now syringe out forcibly with hot water and permanganate, and pump a 25 per cent. solution of acid through the opening, and force it around over the root as much as possible. Oftentimes you will flood the root and surrounding tissues and

force the acid through into the mouth at the gum margin. This last procedure needs some explanation. The operator must exercise his best judgment. If the right course has been pursued, he will take great care in treating; with all hopes lost as to treatment, then the nerve must be removed as a last resort, and absolutely not till then the opening with the drill through the foramen. The lancet before mentioned is to be freely used to aid in this process. You can well understand that this is a most effective and complete way of reaching not only the root and soft tissues, but also the affected portions of the alveolar process itself. So much for the outside; now for the inside: Carry loosely into the canal a strand of cotton saturated with a 10 per cent. solution of the acid. Seal up with temporary filling and allow it to remain twenty-four hours. Renew every day for several days. You will find the root has become somewhat tough and springy, and is now ready to turn over to Dame Nature. Fill the root and she will do the rest. Now just what effect this acid within the canal, also without, has, I do not know, except that it seems to induce a connection between the gum and the tooth, and to bind the tooth more firmly in its socket.

When this is done, ligatures should not be trusted to hold it in place; a gold band cemented about this and the adjoining tooth is always to be used. These bands are extremely useful adjuncts in the treatment of very loose teeth, and for my part I hardly know how I could get along without them. For lower front teeth they are especially useful. Suppose the incisors and canines are very loose. The first step is to band each tooth with a very thin, narrow piece of pure gold plate, letting it cover only a small portion of the tooth just below the cutting edge. These bands, being of pure gold and quite thin, are easily bent and burnished to the loose teeth. Then an impression is taken with the bands all in place, allowing

the impression material to just cover the bands. A plaster and sand model is run and bands joined by a bit of solder between each. This gives you your bands joined in precisely the proper position. Should a tooth be missing, a dummy can be soldered in. This appliance for the present is not to be cemented in, but placed on the teeth between operations and cemented when the surgical work is all done. It is also useful at times during the operation to steady a very loose tooth.

Molars and bicuspid, when so loose as to be almost useless in chewing, can be made comparatively steady by placing a connecting bar in the grinding surfaces. Suppose the twelve and six year molar and both bicuspid are quite loose, a groove is cut with a corundum disk across the grinding surface of each as nearly in a straight line as possible and a bar bent to accurately fit. This groove must be deep enough to allow the bar to lie well out of the way of the opposing teeth and wide enough to be well surrounded by the alloy which is to hold it in. This is no easy task, and is not so simple as it looks, as you will find if you try the operation. Of course this involves quite a loss of tooth structure, but this is scarcely to be considered when the teeth are loose enough to need this support.

Sanitary Barbers.

Paris barbers and hair-dressers are now obliged by the police to take sanitary measures in carrying on their business. Elaborate regulations have been sent out requiring them to use only nickel-plated combs, to substitute pulverizers for powder puffs, to cover the hair cut off with saw dust, and have it removed at once, to wash their hands before waiting on a customer, and to place all metallic instruments, razors, shears, combs, cutting machines, etc., in a solution of soap and boiling water for ten minutes before they are used.

PACKING, VULCANIZING AND FINISHING PLATES.

BY J. A. ROBINSON, D.D.S.,
Morrisville, Vt.

Place a brass washer between the screw and plunger over the flask, which prevents, in a great measure, the turning of the plunger when screwing down the press, causing the flask and press to retain their position rather than to crawl from each other as all have experienced with other presses. In packing and closing flasks I use the vulcanizer boiler for a water-heater, putting in the bottom of it a stool made of zinc, to hold the flasks out of the water. Zinc is preferable to iron or brass for this, as it helps clean the vulcanizer, but do not use zinc in vulcanizers when making attachments to aluminum plates. Put in water to cover stool, and when hot place over it the tin, holding the rubber, cut into strips and squares, then with flasks just warm, not hot, pack them, put them into the press; if but one flask, put the support, usually under rather than over the flask, to raise it still further from the water. Then put press and all into the vulcanizer to steam for a minute or two, closing with wet heat rather than with dry. It prevents heating the rubber too hot as when closing with dry heat. There is less trouble with broken models, dark joints and broken blocks or teeth. I use a vulcanizer eight inches deep and four and one half inches in diameter, in order to have all the room necessary. If the vulcanizer is too small it heats up too fast, and the outside of case becomes vulcanized before heat reaches the center of the flask. A piece of rubber dam, or a piece of the cloth that comes between the sheets of rubber, is placed between the parts of the flask the better to enable them to separate. After heating take out and screw down quite tight, loosen up and open, if too much or not enough rubber correct it, not closing the flask to vulcanize until the rubber is right; then after heating again screw press tightly together with double end wrench.

IF.

BY J. A. CHAPPLE, D.D.S.,
Atlanta, Ga.

If the dam had never been applied to dental use, the mortality tables would show a very perceptible increase in the death-rate of the profession. To go into details to prove this would consume too much time. You may verify it by consulting a reliable actuary of some life insurance company; or you may ask an old practitioner of your acquaintance for his opinion regarding this statement. The moral of this, independent of many other worthy considerations, places upon each individual member of the profession an obligation that can never be properly discharged until he begs the privilege of contributing to a fund for the benefit of the heirs of the late Barnum.

If, and this is the biggest if of all, teeth were pulpless! Ah, how different would be the *statu quo* of things dental were this an anatomical fact! Dental pathology would be almost an unknown and obsolete science in our literature, and this, of necessity, would limit our list of therapeutical remedies, if, indeed, they were not entirely annihilated. The absence of a pulp, however, would be a severe blow to a respectably large and influential element in the oral ranks, by detracting from their well-earned reputation as pulp-cappers, canal-fillers, and death-dealers to the poor little microbe. But, in the language of a recently retired statesman, "we are confronted with a condition and not a theory." So we must humbly acquiesce to the omniscient architect, and continue our building in harmony and design to the divine plan. And since the dental pulp is "ever with us in the flesh," we might as well recognize what it has done for the uplifting of dentistry to the dignity of a learned profession. It requires "no prophet, nor the son of a prophet," in the primary absence of a pulp, to properly classify the past, present, or future status of dentistry. We therefore give thee most cordial welcome, if thou art sometimes an irritated, congested, inflamed, putrescent old pulp.

THE
American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

EDITOR:

B. H. CATCHING, D.D.S.

FRED. BRUGIUS, D.D.S., Editor of the German and French.

Subscription \$2 00 per year; \$1.00 for six months—including Canada and Mexico; other countries \$3 00 per year.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited. The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, September 30, 1897.

TEACH YOUR PATIENTS.

Speaking of educating the public in dental matters reminds us that dentists need to teach their patrons, especially mothers, the great importance of sending their children regularly to have their teeth examined.

Only a few days since an intelligent mother, who prides herself on the good care of her own teeth, brought in a little girl, one of whose superior central incisors, for lack of removal of the temporary tooth, is far intruding, and may possibly require an appliance to regulate.

Another case, a father, who also is exceedingly careful of his teeth, brought in a son whose first molars were so far gone as to be doomed to the forceps. We so often hear the expression, "O, I didn't know those were permanent teeth; I am so sorry the child will have to lose them."

People of intelligence, who appreciate their family dentist, need as well as others to be constantly reminded about the care of their children's teeth. The dentist must not be satisfied with one telling of them, but must constantly remind them of their duty toward their children. It seems so easy

for parents to forget, the children are averse to visiting the dentist, and fond mothers are prone to excuse them, thinking to save them from torture, when in reality this sin of neglect will be visited upon their offspring with terrible effect.

A pamphlet, containing valuable instruction to parents about the care of teeth, is a good thing, but it will not reach every contingency, therefore it must be supplemented by oral instruction.

The most careful dentist can become negligent in this matter.

HOW TO GO TO SLEEP.

At the recent meeting in Montreal of the British Medical Association, in the section of therapeutics, Dr. J. B. Learned, of Northampton, Mass., says the *Scientific American*, gave his experience with the many methods of inviting sleep without taking drugs. He detailed the positions of the body after retiring which he employed. He said the cause of delay in sleep coming is generally the brain running automatically without our consent after we go to bed. He sets the brain to work at once on retiring—it is to direct the respiratory process. It is to count respirations to see that they are fewer in number, regular, deep and somewhat protracted. In addition certain groups of muscles are employed in routine order in silent contraction. By constant change other groups are brought into use. He has completed a systematized routine of contraction and relaxation. A slight elevation of the head from the pillow for a definite time by count of the respirations is one of the many changes of position. All this is without any commotion, and need not be recognized by a sleeping companion. Brain and muscle and all parts of the body soon come into the normal state that precedes and invites sleep. A sense of fatigue soon overtakes one while thus employed, and before he is aware the brain has forgotten its

duty to regulate the breathing process, the muscles have ceased to expand to the call made upon them in the beginning, and sleep is in control of all the forces and all the organs. The details of this method of inviting sleep will not be the same for the strong and the weak. The principle, however, is one and the same—viz., the proper direction of vital energy to brain and muscle, according to the condition of the individual.

The effect of brain and muscles combined, under direction of will, counteracts the one-sided automatic whirl of a little portion of gray matter that has come to antagonize normal sleep and to make night a source of gloom and unrest.

Requisites for a Dentist.

Dr. S. J. Barber, of Portland, Oregon, in his address before the Pacific Coast Dental Congress, which we take from the *Stomatological Gazette*, says the requisites for a dentist are: First, he must be a gentleman. Above all and beyond all he must display the attributes of a cultivated gentleman, and be known among men as an individual claiming confidence of all whose confidence is worth having.

He must be a master mechanic; he must have in his fingers skill to execute the most difficult and intricate manipulations; he must possess the fundamentals of civil and mechanical engineering, and be familiar with the relations of stress and resistance.

He must be an artist of the broadest type, having an eye for harmony of color, for grace of outline and perfection of symmetry.

He must be a creative genius; one who can evolve brilliant conceptions of form and figure.

He must be a man of rare judgment and quick decision, cool of nerve and definite in ideas.

He must have the instincts of the healer,

the soother of pain, the quieter of fears; his touch must be tender, his manipulations firm.

He must be possessed of a high order of intellectuality and be discriminating in his tastes. He should be high-minded. He should study human nature in its varying conditions of temperament till he can read it like an open book.

Northern Illinois Dental Society.

The tenth annual meeting of the Northern Illinois Dental Society will be held at Rockford, October 20 and 21, 1897. A good program is in course of preparation, and dentists generally are invited to attend.

LOUIS OTTOFY,

Chairman Executive Committee.

J. W. CORMANY, Secretary.

Meeting of the Southern.

The Executive Committee of the Southern Dental Association (Southern branch of the National Association) will meet about the 22d February, 1898, at St Augustine, Fla. Dr. Beadles, the president, is working early, and will work constantly for a big meeting.

Lawyer Crop.

There is one lawyer to every 800 people in the United States. In Chicago there is one to every 350 inhabitants. What is the proportion of dentists to the population in Chicago?

For Melting Gold.

One of the nicest and best things for melting small quantities of gold in is a small crucible made of asbestos. Take finely divided asbestos and add a little plaster to it; a teaspoonful of this made into a dough can be easily formed into a small crucible. Place it on a piece of charcoal for melting the gold. One of these crucibles can be used many times.

Dr. E. Magitot.

The Odontological Society of Chicago, recognizing the great services rendered by Magitot to the advancement of dental science, has adopted, and ordered sent to the family of the deceased and to the dental journals of the United States and France, the following :

Magitot was born in Paris in 1833 and died there in 1897. His first contribution to dental literature was made in 1857 at the age of twenty-four, relating to the structure and development of the human teeth, while the last came from his pen in 1897, just before he died. During these forty years, Magitot wrote no less than sixty-five books, essays, pamphlets, etc., dealing exhaustively with nearly every phase of dental embryology, histology, biology, pathology, hygiene, etc. No writer of any age has made as many, as varied and as valuable contributions to dental science as Magitot.

The priceless services rendered by him entitled him to rank as one of the foremost investigators in odontology. He was a member of numerous scientific bodies and societies, whose members sincerely mourn his loss. It may be truly said that when Magitot passed from the scenes of human activity, dental science not of France alone, but of the entire world, lost one of its noblest and greatest minds.

The dental profession of the United States, recognizing and appreciating Magitot's services, keenly mourns and sympathizes with his bereaved family and the profession of France, by reason of his demise.

A. W. HARLAN,

J. W. WASSALL,

LOUIS OTTOFY,

Committee.

Chicago, September 1, 1897.

A Canadian has invented a submarine search-light which on the first test proved entirely successful. It will aid greatly divers in working wrecks.

Soldering Crowns.

Crowns can be easier soldered in a Bunsen flame than with the blow-pipe. The solder should be cut into small pieces and placed in the borax mixture. To prevent the borax, when heat is applied, from throwing the solder out of place, heat the piece very slowly until the water is driven off. To prevent solder flowing where it is not desired coat the surface with whiting mixed in water. The same applied to soldered seams will prevent their opening under the heat.

Sharpening Burs and Files.

W. Dunn, D.D.S., Florence, Italy, says: "A simple way of utilizing old files and burs when quite useless otherwise, is to keep them for twelve hours in a solution of common nitric acid (one part in eight of water). The acid not only cleans out the cut of the instrument, but practically puts a new edge on it. Be careful to cover the stem of engine-burs with wax, so that acid may act only on the bur. Wash with soap, dry and oil the burs or files.

Lead Plates to Strengthen Trial Pieces.

Dr. Dunn, Sr., Florence Italy, says: To avoid the spreading and warping of wax trial cases, especially for upper suction, a couple of thin lead plates are burnished upon the plaster model and put one on the palatal, the other (suitably cut on the ridge) on the lingual aspect of the case with a thin wax layer in between the two; the bite may thus be taken correctly without danger of the case getting awry.

Screw Eye for Holding Chip-Blower.

Insert a screw eye in the upper edge of the operating-table for holding the chip-blower when not in use. It will not be found on the floor when wanted.

A DEPARTURE IN THE MEDICINAL TREATMENT OF THE MOUTH.*

BY THOS. P. HINMAN, D.D.S.,
Atlanta, Ga.

The proper treatment of the mouth and gums, and how to get the greatest benefit from a medicine in the shortest time possible and facilitate its action, is a subject which has been greatly neglected by the dental profession.

First, we will take up the treatment of gums inflamed by the action of salivary calculus. After the tartar has been carefully removed, pyrozone is placed in a vaporizing bottle and air pressure is applied to vaporize it. This drives the medicine down underneath the loose gums, and clears away any remaining pieces of tartar that might be hanging loosely on the gum, at the same time boiling out the pus and blood, acting also as a slight styptic. After the mouth is thoroughly cleansed in this manner, and then washed out with water, pasteurine and water, equal parts, are now sprayed around the teeth and gum in a like manner. This carries the medicine underneath the gum and on the gum in a more thorough manner than can possibly be done by a syringe or by rinsing the mouth. Of course any safe antiseptic or mouth-wash can be used in a similar manner. I only state pasteurine because I have used it with such great success; for, you know, it contains a good per cent. of that king of antiseptics, formaldehyde.

I will next take up the treatment of an abscessed tooth. After a thorough opening has been made into the tooth the pyrozone solution is blown into it with the vaporizer in the same manner, this preventing any possibility of the forcing of the medicine through the apex, as is sometimes done with

the syringe. When the pyrozone has boiled out all the pus, the tooth is thoroughly cleansed with water, and then you can use your antiseptic in the same manner. If non coagulants are used—which should in the majority of cases be done at the first treatment—you obtain the maximum effect of the medicine with the minimum amount of labor and of material. It is so easy of application, and can be done with so much thoroughness that it seems to me it will appeal at once to the minds of the busy practitioners as a method that will greatly facilitate their work. A number of vaporizing bottles can be obtained, each for the different solutions used by the dentists, but all working from one air compressing apparatus. Any number of tips of different forms to suit each case can be used, but I find that one straight tip and one turned at right-angles is all that will be necessary.

In my office, however, I have compressed air, which is supplied me from an air compressing apparatus of unlimited capacity, which I find useful for many other purposes, such as blow-pipe work, chip-blowing, etc.

In conclusion I will say that I have found that sulphide of calcium, 1-10th grain doses every two hours, given internally, has given me wonderful results in curing slight facial neuralgias. I could relate a number of cases, but time will not allow. I only commend it to you as a drug that has been very useful in my hands, and would advise you all to give it a fair trial.

Selecting Teeth.

Dr. J.A. Robinson, Morrisville, Vt., says: Where there are but few teeth in the jaw, and those in front, use bicuspid in place of cuspids. You then have a tooth that looks the same from the front and for utility beats the cuspid one hundred per cent. To those who have never tried it, my advice is, go and do so and see what a perfect adaptation you have got.

Read before the Georgia State Dental Society.

THE DISINFECTED BRIDE.

I's just from Mississippi,
 An' I's a happy coon,
 Kase me sugar she am wid me,
 An' we's on de honeymoon;
 I'se a newly-married nigger,
 An' I state de fact wid pride,
 De fust an' only groom
 Wid a disinfected bride.

Tell de ole folks dat we comin'
 From de fiel's of libin' green,
 From de State of Mississippi,
 Whar dey hab de quarantine;
 Bab de weddin' supper ready,
 Open all de gateways wide,
 Fo' de fumigated groom
 An' de disinfected bride.

—*New Orleans Times-Democrat.*

To Take a Perfect Impression for Partial Upper Plate.

To take an accurate impression of the mouth for a partial upper set of teeth, smear plaster over the roof of the mouth with the finger, take a string about a foot in length, tie the ends together, put the tied ends of the loop into the plaster on the roof of the mouth and add more plaster to thoroughly imbed the knot, leaving loop of string hanging down. In placing the plaster in the mouth, care should be taken to have it come full half way over the grinding surfaces of molars and bicusps, and also cutting edges of the front teeth; then trim the plaster and varnish the trimmed surfaces. The plaster should be so trimmed that it will fill up fully one half of all spaces between the teeth; then cover all the remaining surface of the mouth and teeth with plaster, being very careful to have the teeth well covered and spaces filled in, putting plaster for the buccal and labial surfaces. When set, the plaster impression readily parts where it has been varnished, the palatal portion is dislodged with the help of the string used, and the pieces are then placed together and model made. If a tooth is irregular, use modeling compound about it and trim suit-

ably, then apply the plaster. When removing, it breaks where joined; then remove compound, place in position in the impression and pour the model. Before pouring, the impression should be coated with a lather of soap and then immersed in water for about ten or fifteen minutes. When the plaster has had sufficient time to set, separation can be made, and a model thus obtained will not have any of the fine lines obliterated.—*Dr. Templeton in Dominion Dental Journal.*

Mixing Alloys.

Dr. Black says: I do not care how you mix your alloys for filling, provided certain rules are employed. The first rule is this: The more tin you have, the less trituration you should give it. The more silver you have, the more trituration it demands, for the reason that the alloys with large proportions of tin dissolve in mercury much quicker than alloys with small proportions of tin. You should not manipulate or chop up your alloy in your cavity with your instrument. After you have once squeezed it out you want direct compression of it, hence fillings rubbed in with a burnisher are never so strong as fillings pressed in with a broad serrated point. Furthermore, I would say that I never wash amalgam.

Thousands and Thousands.

Don't be ignorant any longer, but spend a very few dollars and get the *Compendium*, which will give you thousands of the most practical items. You have not the least idea of its great value to the active dentist. Why be ignorant when you can have knowledge?

A pledget of cotton dipped in a saturated solution of camphor in chloroform, placed for a few moments in the socket, will almost instantly afford relief after extraction. Remove as soon as pain ceases.—*D. W. Baker.*

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The Atlanta Dental College devotes its entire time to teaching Dentistry. Its Infirmary rendered services to 8000 patients during the past session.

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The Atlanta Dental College holds membership in the National Association of Dental Faculties and is recognized by the National Association of Dental Examiners.

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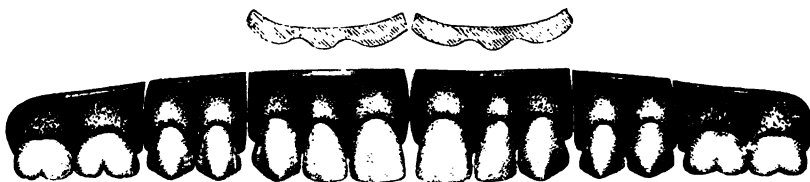
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VOL. I.

ATLANTA, GA., OCTOBER 14, 1897.

NO. 5.

TO INCREASE INTEREST IN DENTAL SOCIETY WORK.

BY H. HERBERT JOHNSON, D.D.S.,
Macon, Ga.

This is a perplexing question and has been puzzling the minds of many presidents of State and local societies for some time past. It is a question worth their while to puzzle over, for it is one of the most important that confronts us at the present time. It is an important question because, just so sure as interest lags in society work, just so surely do we begin to retrograde as a profession. This can be easily demonstrated by taking individuals as examples. Show me a non-reading, non-society man, and I will show you a man practicing in a rut that grows deeper day by day. What applies to individuals applies to the profession at large, for do not these individuals make up the profession? It is an evident and well known fact that the membership of our State societies is not increasing in proportion to the ranks of the profession. Just so surely as a man isolates himself from his society and thereby excommunicates himself from social intercourse with his brethren, just so surely does that man begin to underestimate his profession and to practice it as a trade. Then we have another set which we might class as backsliders. These have made good resolves, have started out right by joining their society, and have attended a few meetings, but from some cause have grown cold and indifferent and ceased to attend. They manage to keep

themselves in good standing by grumblingly paying their annual dues. These members are of no earthly good to the society and are often stumbling-blocks in the way of progress. When occasion arrives that the fact of their holding membership can be used to advantage to themselves, they are ready to herald it aloud; but when an opportunity arises through which they might make a convert, they speak indifferently and slightly about after this style: "Oh, well, I am a member, but the thing is run by a few office-seekers who wish to advertise themselves through the society, and I never attend. I know as much as they do and they can't learn me anything." The would-be convert, hearing a member speak thus, decides at once that he would not care to be associated with such a gang, and dismisses all idea of identifying himself with the society. By this little dash of cold water he may be eternally lost to the professional world. These non-readers and non-members bear the same relationship to members as unconverts, religiously speaking, and should be considered and dealt with as such. They need to be shown that it is their own shadow that is darkening their pathway to progress. For this purpose we need a few missionary workers, in each town and city, who are not ashamed, afraid or too proud to walk up to an erring brother and show him the error of his way. There it not a man among us who does not have an opportunity once in a while to do a little missionary work of this kind. Do we take advantage of the opportunity? I am afraid not. It is not

sufficient to excuse ourselves by saying "He practices unprofessionally, or he advertises, and I will not associate with him." Those are the very men we need to convert and reclaim from their downward progress. As we love our profession and desire to see it take on and maintain an upward growth, let us strive as individuals to get converts for society work, for therein lies to a great extent our future.

DENTISTRY AND CHEMISTRY.

BY EDGAR EVERHART, PH D.,
Atlanta, Ga.

Until quite recently England has stood pre-eminent in manufactures and commerce, but in the past few years Germany has taken such immense strides in industrial pursuits that she has almost usurped England's place. The cause of this tremendous change is almost universally ascribed to Germany's technical schools. In that country every facility is given the student to familiarize himself with the various arts and sciences that bear, even indirectly, upon his trade or profession. He is thus enabled to understand and to utilize whatever may tend to the advancement of his calling.

Prominent among the sciences in its application to almost every profession and trade is chemistry, and Germany has long since recognized its value. Probably nine-tenths of discoveries in chemistry to-day come from Germany. As an example it might be of interest to cite just one trade in which this country leads the world. Almost all of the coal-tar colors are made in Germany, where there are hundreds of factories for these substances. In one of these, probably the largest, there are employed seventy chemists whose sole labor is to experiment on dyes and dyestuffs. These chemists are educated men, and most of them have received the doctor's degree from a university.

Not only in the trades, but also in the various professions, is chemistry being more and more recognized as a very necessary

adjunct. Even in the legal profession lawyers must be acquainted with this science so as to be able to examine witnesses intelligently. The lack of this knowledge often painfully apparent in cases of trials for poisoning. In the celebrated Maybrick case it has been asserted by a leading chemical journal that the defendant's interests suffered very materially because of her counsel's inability to cross-examine the expert's testimony.

In medicine, one would naturally suppose that every physician should be something of a chemist. In this country at least practically no chemistry is required for the degree of M.D. in 90 per cent. of medical colleges. As a natural sequence comparatively few remedies of any value are discovered here, almost all recent additions having come from foreign lands. It is but just to say, however, that a different condition of affairs is beginning to obtain in the better class of colleges of the United States.

In the dental schools the study of chemistry has been almost entirely neglected until quite recently, and it is gratifying to know that the importance of this subject has been recognized by the best of the colleges in the South. Whatever chemistry has been taught has been usually by text-book work. Now chemistry is nothing if it is not experimental, and to teach it without putting the student to work in a laboratory is very much like teaching a man to play on a fiddle without giving him a fiddle to practice on. One must have experimental work so as to obtain any mastery at all of the subject. This science is the most artificial of all the sciences. It accords with our modern civilization, which is wholly artificial.

Before touching upon the practical relationship between chemistry and dentistry, it may not be out of place to mention briefly one or two general benefits to be derived from the study of the former. In the first place our powers of observation are cer-

tainly cultivated by this study, for every reaction must be carefully noted, and all changes that take place studied. The mere handling of apparatus trains the hand and eye, and gives to one that delicacy of touch that is so important and desirable. Again, I believe that this study tends to inculcate truthfulness into its students. Both truth-telling and lying are merely habits, and as the chemist must transcribe into his notebook the exact changes he observes during his investigations, unconsciously he acquires habits of accuracy of statement that stay with him always.

Americans probably excel all other people in their mechanical appliances. Dentistry in some of its most important branches is largely a mechanical science, and for that reason, most likely, American dentists are in the very foremost rank. There is, however, another part of dentistry that is intimately connected with chemistry, about which it is my purpose more particularly to write.

JUDGMENT IN CHOOSING METHODS AND MATERIALS AS ESSENTIAL AS THE OPERATION ITSELF.

Up to the time of the introduction of rubber for the manufacture of artificial dentures, gold was used almost exclusively as a base for plate work. Rubber being less expensive and so much easier to manipulate it almost supplanted the use of metals for this purpose. Since the theorist's discoveries of the immense inroads made by the innumerable armies of bacteria in the pathological conditions of the tissues of the oral cavity, and since the powerful lenses of the microscope have proven the pores of the rubber to be but the many multiplied homes of this great enemy to health, the question is frequently asked, "Has the introduction of the rubber plate been a blessing or a curse to the dental profession and its pa-

trons?" Following close on to this query and the feeling of dissatisfaction with the experience of many years with rubber as a plate material, comes the introduction of bridge-work, which, for a while, withstood the criticism of the profession, until at last the cry now comes from many quarters, "Too much bridge-work."

What conclusion, then, must we reach as to what is the best that can be done for those of our patients who have been so unfortunate as to lose one or more teeth?

If you will trace the history of the different methods, materials and remedies used for any length of time by the dental profession, you will most likely conclude that at the time such methods, etc., are carried to extreme use, is the time they are criticized most severely. While it may be true that by going to extremes we can sometimes better find the fallacies and errors that have been misleading; at the same time, in seeing the error, we should not overlook the good that a happy medium might bring. Rubber plates have unquestionably been a great blessing; not, however, by supplanting entirely the use of gold plates. Bridge-work has and is being done with much credit to the dentist and much comfort to the patient, but should never reach that point that it will be a universal substitute for partial plates.

Often you have seen from four to six perfectly shaped teeth, with possibly no signs of decay, mutilated with corundum wheels and disks, to be used as piers or supports for bridges, which give promise of service for from three to five years, when a partial plate made of gold would have been infinitely better, and given more comfort and service to the patient. Take, to illustrate, the following case calling for an upper partial plate, or two or three bridges: Teeth missing, right central, left first and second bicuspid and right first molar; all of the adjoining teeth that might be used as piers for bridge-work in fairly good condition. Under the conditions stated, would it not

be better to make a neat fitting, good plate, than to bridge the three spaces?

It must then be evident that in trying to arrive at what is the best that can be done for those demanding our professional services, that in addition to the various methods and abundance of materials at our disposal, we must use a sufficient amount of common sense backed up by good judgment.

One of the hopeful signs of progress in our profession is the fact that we are learning to grasp "the new" without discarding "the old." The practical, common sense, progressive dentist of the present age will have in his cabinet of materials new and old remedies. He will have soft, cohesive, and crystal gold. He will make gold, rubber or celluloid plates, or bridge-work, as the case calls for. He is wedded to no one idea, method or material to that extent that he does not see the good in others.

H. R. J.

MAKING DENTAL ALLOYS AND CEMENTS.

BY LOUIS SHAW, M.D.,
Brooklyn, N. Y.

The investigations and writings of Dr. Black have induced many to make their own alloys. To aid in this the writer gives his method in the *International Dental Journal*, from which we make extracts as follows:

I shall not discuss the various ways in which an alloy can be made. Each manufacturer of an alloy no doubt has a way of combining the metals that he thinks best. But I shall describe a method that I have used for a number of years with satisfactory results.

For melting the metals I have used a gas furnace made by the Buffalo Dental Manufacturing Company, and known as No. 40a, Fletcher crucible furnace. This can also be had to work with kerosene. A plumbago crucible comes with the furnace. The other articles necessary are an ingot mould, a

small pair of crucible tongs, and a short clay pipe-stem.

The silver is first melted, adding enough borax to cover its surface and protect it from the air. If the alloy is to contain copper, the blast must be kept up a few minutes to raise the temperature of the melted silver. The copper, in the form of very thin sheet or foil, is now added piece by piece.

If it is to be an alloy containing gold, the proper proportion of gold-foil scrap, wrapped in a piece of paper, is dropped into the crucible.

When the gold or copper is melted, the blast is kept on a few minutes and the other metals of the alloy added, those having the highest melting points first. The tin, of course, will come last, and is best added in pieces the size of a large marble.

As soon as the last piece of tin is added the crucible is held in the furnace by tongs, and its contents stirred vigorously with the clay pipe-stem, suitably fastened to a piece of wood. While still stirring, the metal is quickly poured into the ingot mould. The stirring and pouring before the metal comes to rest is to produce as uniform an ingot as possible.

Some may have difficulty in procuring pure metals. Pure silver, in grain form, is sold by gold and silver refiners. Pure copper, zinc and tin can be bought from those who supply analytical and experimental chemists.

The ingot is readily reduced by a large coarse file, which must be kept for this purpose only. Passing a magnet through the thinly spread filings will remove any particles of steel from the file.

The filings must now be tempered as directed by Dr. Black, either by keeping them in an oven at a temperature of 120° F. for three days, or putting them in a glass flask and immersing the flask in boiling water for fifteen minutes.

Lately I have adopted three formulæ sug-

gested by Dr. Black. They are the following: one of silver and tin—viz., silver seventy-four parts, tin twenty-six parts; one containing copper—viz., silver sixty-four parts, copper four parts, zinc one part, tin thirty parts; and one containing gold—viz., silver sixty-eight and one-half parts, tin twenty-five and one-half parts, gold five parts, zinc one part. Dr. Black speaks favorably of this last formula.

CEMENT.

As is generally known, cement powder is oxide of zinc, usually with some silica added with the idea of making it more resistant to wear.

In most of the directions for preparing this powder, oxide of zinc is dissolved in nitric acid, and the nitrate of zinc is afterwards heated to drive off the nitric acid, leaving zinc oxide.

This part of the process is enough to deter most dentists from trying to prepare cement powder, as the fumes of nitric acid are very corrosive and difficult to get rid of, except through a chimney arranged for carrying off acid vapors.

This dissolving of the oxide is not necessary, and, by omitting it, any one can prepare the powder with little difficulty. Most oxides of zinc made in the United States are too impure for dental use.

French oxide of zinc is much purer and makes a very good cement. Hubbuk's English oxide of zinc is the purest I have been able to obtain, and produces a very white cement. All other oxides I have tried produce a more or less yellow product. This yellow color is owing probably to traces of the oxides of other metals. These are not sufficient, however, in the oxides of zinc prepared for medicinal use, to affect their value for cement. If a white cement is not desired, they answer very well.

The oxide is placed in a sand crucible and the cover luted on with potters' clay mixed with water.

The crucible is now placed in a coal fire—a range will do—and covered with coal,

so that it will all be brought to a red heat. After being held at a red heat for two hours it is removed and allowed to cool.

The oxide is now removed and rubbed to a fine powder in a Wedgewood mortar, when it is bottled to keep it from the air.

The liquid is made by dissolving in water sufficient glacial phosphoric acid to make a dense syrup solution.

It is difficult to state the exact composition of the liquid chemically, as all commercial glacial phosphoric acid contains from seven to fourteen per cent. of sodium phosphate. On being dissolved, the glacial phosphoric acid slowly takes up another equivalent of water, and finally a third, becoming at last ortho-phosphoric acid. The liquid may then be a mixture of the three phosphoric acids holding sodium phosphate in solution. My knowledge of cement liquid is unsatisfactory, and I cannot always get uniform results with different lots. I have not been able to get pure glacial phosphoric acid, but hope with further study of the phosphoric acids to be able to prepare a liquid that will be always uniform. The process described, however, produces an oxyphosphate cement that compares favorably with any I have purchased, both as to working qualities and insolubility.

[After all, is it not better for a dentist to buy his amalgam and cement from some reputable manufacturer?—EDITOR AMERICAN DENTAL WEEKLY.]

Gold Crowns not a New Thing.

Is there anything new under the sun? This is seemingly a pertinent question in this connection, for here comes Dr. W. H. Trueman in the *International Dental Journal* and says he has discovered a book written by M. Mouton, a dentist of Paris, in 1746, in which is described the gold crown, and the use of it is recommended especially for molars. The prospective young graduate must look carefully, when preparing his thesis, so as not to claim the earth for modern dentistry.

A TREATMENT OF ALVEOLAR ABSCESS.

BY GEO. S. TIGNER, A.B., D.D.S.,
Atlanta, Ga.

In a short article I wish to describe as simply as I can an abortive treatment of acute alveolar abscess, omitting the etiology and the diagnosis thereof.

This treatment is applicable to abscesses in incipency, and even to those in which pus has begun to form. When a patient presents himself at your office and you diagnose a case to come within the range of this treatment, you must put on the rubber dam and secure ample access to the pulp canal, leaving no obstruction to a direct line of its general direction. With a small drill proceed to remove the *débris*. As you approach the apical foramen, the frequent removal of the drill is the surest safeguard against forcing particles of purulent matter into the apical space. If a crooked canal is encountered, you can make your way through the foramen with sulphuric acid, full strength, or even 50 per cent., worked into the canal on a worn Donaldson's nerve broach.

Before drilling through the foramen spend five minutes cleansing and sterilizing the canal with the 3 per cent. solution of pyrozone. This done, drill into the apical space, observing the caution already given about forcing the *débris* through the foramen, and lacerate the soft tissues found there.

By the use of a hypodermic syringe, with long, slender needle, 3 per cent. solution of pyrozone may be pumped into this region in small quantities and allowed to effervesce until the pus is destroyed and washed out, and an increase of pain marks its contact with healthier tissues. Dry out thoroughly and introduce a solution of iodoform on shreds of cotton wrapped around the worn broach.

I am indebted to Dr. J. A. Chappell, of Atlanta, for a prescription in which iodo-

form is held in solution and its objectionable odor is overcome. It is as follows:

R

Iodoformi.....	gr. 25
Camphoræ.....	3 i
Alcoholis.....	3 j

M. by dissolving camphor in the alcohol and adding the iodoform.

Remove the cotton and pump in hot air until the fluids are evaporated, and the iodoform will be left deposited in the tubuli and on the walls of the canal. Fill the canal and crown cavity with the oxychloride of zinc, which, if mixed to a creamy consistency, can be carried to the end of the canal quickly by wrapping a shred of cotton loosely on the end of a fine worn broach and pushing up the length of the canal. Repeat this until the canal is filled. You may fill the crown with a more lasting cement. When it hardens thoroughly, remove the dam, dry off the gum over the root of the tooth and paint this surface with equal parts of the tinctures of aconite and iodine. Prescribe a saline purgative and dismiss the patient for two weeks, instructing him to guard against constipation, and to consult you whenever inflammation threatens this region again.

The treatment I have tried to describe is not infallible, but will furnish occasional disappointments. If you have succeeded in reaching the seat of the inflammation, and have done each part of the operation according to the requirements of strict anti-septic surgery, you may leave the rest to *vis medicatrix naturæ*, and expect good results. You have done the operation at one sitting and avoided the error of too much treatment, thereby saving much time to both parties concerned. The patient returns in two or three weeks, when a permanent filling may be inserted; however, this may be deferred for months, possibly for years.

A man can never become a gentleman in manner until he is a gentleman at heart.—
Dickens.

CHICAGO CORRESPONDENT.**COCAIN IN THE NOSE.**

Dr. G. T. Carpenter read a very excellent paper before the Chicago Dental Society on the "Restoration of Gum Tissue." He evidently believes in the old maxim, "Brevity is the soul of wit," for in a speech of but a few minutes he told the society of his experience and experiments in the line of gum tissue restoration during the past seventeen years.

The subject itself had aroused the curiosity of all, and his remarks were more than pleasing to every one present.

His idea of reproducing gum tissue originated in the observation of hypertrophied tissue due to ill-fitting, artificial dentures and bands, and his method to-day is to construct just such bands and plates, or rather little shields made of rubber that do not exactly fit, but irritate the surrounding tissues of the place he seeks to cover with new gum. After properly preparing the edges, surfaces and teeth, he fastens these appliances by means of small platinum strips to the teeth in his original, unique way.

The discussion was ably opened by Dr. I. A. Freeman, and was participated in by Drs. G. Noyes, A. W. Harlan, G. V. Black and others.

Dr. Black doubts the lasting qualities of the new tissue, as it is not firmly attached to the necks of the teeth, and he does not like pockets of that kind.

(I certainly think the tissue of such pockets could be made to cling to the necks of teeth by using concentrated lactic acid in them, according to Dr. Younger's method.)

Such papers are a credit to any society, showing a great deal of hard experimental work on the part of the essayist and the proper spirit to impart his results to others.

H. H. SCHUHMAN, M.D., D.D.S.

Chicago, Ill.

The Southern Dental Association will meet February 22d, at St. Augustine, Fla. President Beadles is moving matters forward rapidly.

To the Editor:

I note with interest Dr. H. H. Schuhmann's article in your issue of September 30th, on obtunding anterior portion of superior maxilla by placing strong cocaine solutions on cotton in the meatus of the nose.

All that Dr. Schuhmann says as regards effects, I have found true. Indeed, I would make even more advanced claims than he does as to the possibilities in sensitive dentine of the incisors. I wish to suggest, however, the need for caution in using the process. I do so because of the following case:

Some six years ago Dr. E. P. Robinson, of this city, called my attention to the possibilities of the process Dr. Schuhmann describes, having been led up to it as a result of an operation performed on his own nose, and noting at the time a numbness of the incisors.

I used the process with success up to January 1st, '92, when I used it with great satisfaction in the preparation of two exceedingly sensitive incisor cavities. That patient went home to go into the physician's hands for two days with cocaine poisoning.

The manifestations were sufficiently alarming to lead to a prohibition of the use of any cocaine in future for that patient, and to bring upon me considerable adverse criticism.

A study of the medical journals will show that the rhinologists are advising the use of only weak cocaine solutions in the nose.

In conclusion, Dr. Schuhmann's suggestion is a good one. Select your cases for its use with the same or even more care than you would exercise when using cocaine hypodermically.

HENRY W. GILLET, D.M.D.

Newport, R. I.

WANTED: A clean copy of the 1890 Compendium, for the library of the Surgeon-General's office. Address the AMERICAN DENTAL WEEKLY.

A Philanthropic Dentist.

The daily press reports that Dr. Evans, of Paris, will appropriate considerable of his large fortune in founding and maintaining educational institutions in different cities in this country.

If the distinguished gentleman has been correctly quoted, we offer, briefly, a suggestion, the realization of which would prove the consummation of a long cherished desire not only by the writer but by thousands who subordinate *dollars* to *science*.

We would like to see established in one of our large cities, Washington for instance, what we would call a Dental Experimental Station, with branches located, respectively, on the extreme southern border, extreme western coast, and one in one of the central States, where experiments and observations could be made with reference to climatic conditions (?) as affecting pulp capping; the conditions precedent to pyorrhea; the effect of dietetics and hygiene upon the dental organism, and many other experiments of a mechanical and therapeutical nature.

An institution of this character would at once attract international attention and interest, and would prove a most excellent channel through which the general public could be educated to a higher appreciation of dental science.

That we may live to see these suggestions assume a tangible form is the prayer of

J. A. C.

Alcohol Versus Water as a Menstruum for Disinfectants.

W. Dunn, D.D.S., Florence, Italy, says, dip an instrument in alcohol, and it will be instantly moistened all over; dip an instrument in water, and if it be at all greasy the water will not touch it. That is why, for general use in dental practice, alcohol is a safer solvent for disinfectants such as bichloride of mercury, permanganate of potash, etc., than water is.

THOMAS FILLEBROWN, M.D., D.D.S.,
BOSTON, MASS.

President of the National Dental Association.

Dr. Thomas Fillebrown was born in Winthrop, Maine. Was educated at the Maine Wesleyan Seminary. Graduated at the Medical School of Maine and the Dental School of Harvard University. For several years he was lecturer on dental subjects at the Portland School for Medical Instruction. In 1883 he was appointed Professor of Operative Dentistry in Harvard University, and in 1897 Oral Surgery was added to his duties. He is now Professor of Operative Dentistry and Oral Surgery. He commenced the practice of dentistry in Lewiston, Maine, in 1861; removed to Portland in 1875, and since 1883 has practiced in Boston. He became a member of the A. D. A. in 1876.

An Iron Denture.

A denture made of iron-plate was shown at the Great Brittany Club, by Mr. Sidney Spoker. The plate was made and worn thirty-two years ago, by an engineer, who is now seventy-eight years of age. It has three pieces of bone riveted on it with iron nails!

F. A. B.

THE
American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

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Subscription \$2.00 per year; \$1.00 for six months—including Canada and Mexico; other countries \$3.00 per year.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, October 14, 1897.

The Weekly Grows.

Doubtless it will interest the readers of the AMERICAN DENTAL WEEKLY to know that a stock company has been formed to own, edit and publish it. The names of those forming the company appear above.

While the success of the enterprise was assured from the start, yet it now comes with additional strength and energy. The company is composed of active, progressive dentists, and it will be our aim, the profession co operating, to make the AMERICAN DENTAL WEEKLY the newsiest and freshest publication afloat. In this connection we extend a cordial invitation to dentists at large to use its pages for the dissemination of knowledge and information of interest to the profession. As a profession, we learn by the interchanging of ideas and methods. A weekly journal affords a speedy method for giving and receiving information; therefore if you have anything, great or small,

that you would like to tell to others in return for what they have told you, send it along.

Dentists in the Army and Navy.

Brigade Surgeon Lieutenant-Colonel William Hill Climo, M.D., in September number of the *United Service Magazine*, London, in an exhaustive article on the personal hygiene of the soldier, says: "It used to be my custom to examine the mouths of all young soldiers on joining their regiments. The want of care shown by them was phenomenal. Between the teeth, often unsound, were lodged broken pieces of food. In many instances I often found it to amount to 20 per cent.; the gums were soft and spongy, and bled on the slightest pressure. What a constitutional state did this represent to resist disease, and what a nest for the germs of zymotic diseases to rest and develop in. It will, perhaps, be thought that these are trifling matters. Such is not the case. I vouch for their prime importance. The importance of sound teeth to the soldier is very rightly insisted on, though no doubt it is not so much so as in former times, when, because of long voyages, or protracted campaigns, hard biscuit formed the staple food. Still, there can be no doubt, to preserve the health and to ward off many forms of sickness, a good set of teeth is no mean armament. It has often occurred to me, this being so, why it has been that, while the state of the teeth on enlistment is a matter of stringent regulation, yet afterwards it is practically neglected. The Army Medical Staff, by their present training, are not competent to deal with it. *In every large garrison, if not certainly in every district, there ought to be appointed a duly qualified dentist, and for duty with troops only.*" Italics ours.

When such testimony as this is offered to sustain our claims for the appointment of dental surgeons in the army and navy, the time is not far distant when it will become a law on our statute books. J. A. C.

The President's Picture.

We take pleasure in presenting the picture of Dr. Thomas Fillebrown, of Boston, president of the National Dental Association (of America).

We feel sure that under his able leadership the new organization will move smoothly on, and that the first meeting next year at Omaha will be a large and successful one.

Those who have met the genial president need no introduction to him. Those who have not had that pleasure, and they must be few, will find him a most agreeable gentleman. All will declare him to be the right man in the right place.

We have received a copy of the "Preamble and Constitution" of the National Dental Association (of America), as adopted at Old Point Comfort. Copies can be had, we presume, of Dr. Geo. H. Cushing, of Chicago.

Armour Paid the Bill.

An officer of the United States Army, at the Atlanta post, while enjoying a meal at which canned beef was served, came down with considerable force, and with just as much surprise, upon something very much harder than the beef, causing the jaws to bring a very sudden and unexpected halt; upon examining the contents of his mouth he discovered besides the quid of beef, first a large part of a molar tooth, which he recognized as his own; second a considerable piece of solder, which he supposed originally belonged to the manufacturer of the canned beef.

The officer went to his dentist and had the broken tooth repaired with a nice gold filling. After paying the bill, having the same receipted, he forwarded it to the company putting up the canned beef with an explanation of how the accident occurred. Whereupon they sent him a check to cover all expenses of repair.

H. R. J.

Bridge with Cuspid Support.

An artistic bridge is always desirable; too much showing of gold in the mouth is vulgar. To anchor a bridge to a cuspid without showing the gold, Dr. Carr, of Durham, N. C., in the Ohio Dental Journal, says:

Suppose a case requiring the use of a superior cuspid tooth for treatment. To crown the cuspid with gold would be extremely inartistic; to cut it down sufficiently to put on a "window" crown would injure the shape of the tooth, besides showing an unsightly band of gold at the cervical margin. How then shall we secure one end of the bridge to this tooth in the strongest and most artistic manner? Briefly stated, I would proceed as follows: Grind the palatine surface of the tooth sufficiently to allow a cap of gold to fit over it; then drill three pits, sufficiently deep to cement in three platinum pins, the size of the pins used in artificial teeth, drilling the pits at point most distant from the pulp. Burnish a piece of platinum foil over the surface of the tooth that you have ground down; trim it to shape and thrust the platinum pins through the foil into the pits, allowing them to project sufficiently to come away with the foil when removed, which now proceed to do by means of "sticky wax" softened, and pressed over the foil and pins. Invest in plaster and very fine marble dust; when this has set remove the wax and flow pure gold or 22-k. gold solder over the platinum and pins sufficiently thick to give the necessary strength. With this in position take impression, make articulating model, back up your teeth, put in place and solder. By this method no gold shows except at the tips of the porcelain teeth, and possibly a gold tip on the cuspid. This method was evolved from the fertile brain of our fellow-member Dr. C. L. Alexander. I speak of the advantages of this method of construction in bridge-work from personal experience as I have one in my own mouth, besides having made others to the perfect satisfaction of my patients.

To Prevent Weeping Gum.

Before mounting a crown on a root or abutment, or filling a labial cavity where a clamp or the dam cannot well be applied, a wisp of cotton on a broach, dipped in trichloroacetic acid and passed gently under the gum margin, will prevent the weeping of the gum, thus keeping root and cavity dry. It is also a splendid styptic.

A bottle of lavender smelling salts should be kept constantly in your cabinet. It will prove quite acceptable and refreshing to your patients who are easily nauseated, suffering from headache or slight pain.

To deodorize any disagreeable odors in the operating room, burn oil of cassia on a wisp of cotton over the alcohol lamp.

Pasteurine, a teaspoonful, placed in the water, aside from its excellent antiseptic properties, is very pleasant to the patient when syringing out cavities. Should the patient present a bad breath from any cause, Pasteurine in its full strength may be used.

J. A. C.

Micro-Organisms in Decay.

Since, by the work and experiments of Dr. J. L. Williams, it seems to have been conclusively shown that the commencement of decay is not always the result of defective soft enamel, but may be the result of the direct action of bacteria on hard perfect enamel, a new phase in the treatment of dental decay may be opened up.

Dr. Williams seems to have shown that it is not always acid secretion from unhealthy gum tissue, acid saliva nor any other direct or indirect application of acids to enamel which causes a breaking down and disintegration of the enamel rods, but that it is often caused by an acid secretion from the micro-organisms themselves, which are found in clusters on the surface of hard

enamed with this result taking place underneath them.

We would offer the suggestion that this work would be worth the while of every dental surgeon to investigate.

H. H. J.

Immediate Investing Material.

A nice and convenient way to make an investment for soldering, is to take a small quantity of asbestos fiber, place it in a dry rubber bowl and incorporate with the fingers as much of Teague's impression material as the asbestos will take up. Moisten the compound as you use it, and shape the investment with the fingers as desired, around the piece to be soldered. The investment becomes hard immediately on being heated, and does not change its shape at all. Plaster will not do as a substitute for Teague's material, as it will change its shape on being heated, even when mixed with asbestos.

In using the above to invest pieces of work held together by wax, the wax should always be removed by warming the investment and picking it out with the point of a suitable instrument. Hot water poured upon the investment softens it on account of the asbestos fiber absorbing the water. Porcelain faces can be invested with this mixture and dried out immediately with the flame of a blowpipe without the least danger of cracking them.

H. R. J.

This is the Way They Come.

I have just received sample copy of the AMERICAN DENTAL WEEKLY, and like it very much. Enclosed find subscription.

W. E. COTTINGHAM.

Morganfield, Ky.

Output of Copper.

During the first seven months of the year, the copper mines of this country put out 108,000 tons of the metal.

Silver Nitrate in Superficial Decay.

While this is not a new subject, yet it is not old enough for all that is good about it to have been said. We make extracts from some remarks reported in the *Stomatological Gazette*. Dr. Cox says there are many cases where a patient will come, showing a little white streak just above the border line of the gum on the buccal surface of the molars or bicusps. It is simply superficial. My advice in those cases is not to put on the rubber-dam, but simply a napkin in the mouth to keep the moisture from the teeth, dissolve a little nitrate of silver, rub it on that streak, and play hot air from the syringe on it, and notice the result.

On the same line, D. Van Orden suggests in addition to the above, to paint the gum with tincture of iodine, which will form iodide of silver, and it is quite an important addition for preventing the spreading of nitrate of silver. It can be very easily done. Take little pellets of cotton, roll the cotton and paint the tooth. Have a good supply of these at hand, lay them on a little glass slab, several of them, in case of necessity, so that they can be applied to the tooth.

In treating many cases of third molars, Dr. Whitney makes use of silver nitrate. He says when excavating a third molar, at first you think there is very little decay; then, as you go on, you find this white condition extending on and on, and finally, perhaps, the whole buccal surface has been cut away. Now, in such a case as that, when a tooth is in that condition, I always, before putting any filling in, saturate that with nitrate of silver, unless it is quite near the pulp. In that case I cap the pulp with cement, and then use it about the border, and I have had excellent results in that class of filling.

A new way of applying the silver solution is reported by Dr. Bliss, as follows: In

the preparation of nitrate of silver for superficial decay, I dissolve it in alcohol, then place in the solution particles of asbestos, not powdered, but the coarser kind we usually have in the market; afterward drying the particles of asbestos. It can be applied very easily. I also find it better to apply the rubber-dam before applying the nitrate of silver, and wait fifteen or twenty minutes, or perhaps longer.

Sulphur in the Treatment of Wounds.

The application of finely powdered sulphur on wounds is recommended by the *Therapeutic Gazette*, which journal claims a quicker healing process, even of such wounds as cannot be healed by any other treatment.

The sulphur on the wound forms sulphuric acid, sulphurous acid and sulphureted hydrogen; all of them act as disinfectants. The pain sometimes created by the sulphuric acid is readily removed by the addition of some glycerine.

The sulphur is rubbed on the surface and the wound then dressed; the application repeated every twenty-four to forty eight hours.

Yellow Jack

Is holding high carnival among some of our brightest luminaries, but their host of friends and confrères throughout the country trust they will prove invulnerable to his attacks, and continue to do business at the same stand for many, many years to come.

J. A. C.

Plug-Finishing Strips.

Architects' tracing-cloth cut into strips has been often spoken of as excellent for finishing amalgam fillings before they harden. It is also used for carrying powders for finishing gold fillings. The cloth is very thin and strong.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., OCTOBER 21, 1897.

NO. 6.

OBSERVATIONS PRELIMINARY TO ORTHODONTIC OPERATIONS.

BY W. H. JACKSON, D.D.S.,
Ann Arbor, Mich.

Before we commence orthodontic operations, the field of inquiry is so very large that I cannot more than touch upon a few of the most important points that bear upon this subject in a short article like the present.

When consulted in reference to these operations, the only aim of the operator should be to do the patient the greatest amount of good with a minimum amount of harm. Should it be found that the harm of an operation would be such as to depress the general system beyond repair, the operation should not be undertaken.

The nervous system is more or less affected in all orthodontic operations, and the amount of irritation will be governed by—

1. The temperament of the patient.
2. The physical condition.
3. The extent of the operation.
4. The density of surrounding tissues.
5. The manner of manipulation.

Owing to the mixing of all nationalities in this country we have no established types, hence there is an endless variety of temperaments, which are difficult to define.

The nervous temperament and those bordering on the nervous give us by far the most trouble, sometimes giving much cause for anxiety, especially where the patient is young, on account of the susceptibility of the great nervous center to intense feeling

or excitement. Frequently in such cases it is unwise to operate, for serious results are almost sure to follow, as the physical system has not vital force enough to stand up under the intense nervous strain put upon it.

Sufficient attention has not been given to the physical condition of the patient before commencing and during these operations, as the operation may last from a few weeks to many months. If it is hard for a well person to undertake, what must be the effect on a weak, sickly patient?

If there are lesions of nutrition present, preventing proper assimilation for the growth of the tissue to follow the moving tooth, it would be folly to commence operations without first correcting the nutrition.

If there have been periosteal lesions which show a tendency to inflammation of that tissue when injured, or by sudden changes of temperature, resulting possibly in caries or necrosis of the osseous tissues, it will require the utmost care and vigilance during the whole operation. Sometimes, where the conditions have been severe, it would be wiser not to operate.

Rheumatic conditions contraindicate an operation, especially where they attack the periosteum. Happily these conditions are not often found in patients requiring orthodontic operations.

Scorbutic diseases demand attention, and should be corrected and the system placed in a thoroughly healthy state before attempting to operate, and these diseases are frequently found in the young as well as in older patients.

Uremic diseases should be corrected when present. Elimination is just as essential for health as assimilation, and it would be well if more attention was given to bringing it about.

Phthisical patients should be dismissed at once without operation, as anything that tends to lower the action of the vital forces will have a tendency to accelerate the disease.

Sometimes the hereditary conditions are such that an operation cannot be made without fear of stirring up a sleeping lion that may be difficult to quiet.

Often the character of the deformity is a family trait, and has been handed down from generation to generation. In such cases you can generally feel assured that though you succeed in bringing the teeth into perfect position, they will, as a rule, find their former position, or approximate to it.

Long, severe operations should not be undertaken on patients while attending school, as the mental work takes up so much of the vital force to supply its needs that there is little or nothing for the physical system to appropriate.

After eliminating the impossible and doubtful cases, and correcting, as far as possible, any diseased condition that may have been present, we are ready to consider that which will have to be done with the case in hand. Above all things do not be in a hurry, but study the case in all its phases, the probability of success or failure; the amount of improvement in the appearance of the patient by the operation.

After having gone thus far you will be ready to commence the work of accomplishing the desired result.

One of the most prominent dentists in the South says, "Three cheers for the AMERICAN DENTAL WEEKLY!" And so they come. Don't you want it to visit your office once a week—fifty-two times a year?

DENTISTRY AND CHEMISTRY.

BY EDGAR EVERHART, PH D.,
Atlanta, Ga.

Dentistry is not, as so many regard it, a purely mechanical art, that stage of the science having passed away with the barbers of the middle ages. The mastery of this profession necessitates the acquisition of other cognate sciences, which bear more or less directly upon it. In considering the special applications of chemistry to dentistry, it may be well to preface the article with the statement that the author is not a dentist, and that therefore he should be excused for many omissions that, no doubt, will occur to the profession. The chemist, without a knowledge of dentistry, cannot apply his special knowledge to the needs of the latter; while a dentist, ignorant of chemical laws and chemical phenomena, cannot utilize many well-known facts that probably would greatly facilitate or advance his professional work. It is not to be expected, nor is it even desirable, that a dentist should become a professional chemist, but it seems to me that he should know enough of the science to choose from its rich store of phenomena such treasures as will enrich his own field. Hence the advantage of chemical work in a dental college.

In the preservation and care of the teeth one of the first things that strikes the physiological chemist, is the intimate connection that must exist between unsound teeth and good digestion. To paraphrase, "*dens sana in corpore sano*" is as true as the original quotation. Of late years we hear much of bacteria and of their influence upon human life in all its details. Bacteriology is certainly one of the most interesting and beautiful, as well as one of the most important of the sciences; but we must not lose sight of the fact that often, if not always, bacteria are first the result of conditions before they can produce conditions. Their existence depends upon their environment, and this

environment in the mouth is largely dependent upon the various organs of digestion. The gases exhaled from the mouth are not merely oxygen, nitrogen, water and carbon dioxide, but they are mixed with particles of matter, gaseous, liquid and solid. These contaminating substances are influenced by the processes of digestion, and may be either harmless or hurtful to the teeth. I believe that the dentist should be able to advise his patients, in general terms at least, with regard to their diet; and in order for him to give this advice intelligently, it is necessary for him to know something of the character of different foods and drinks, and something of the chemical changes taking place during digestion.

The teeth of children and others are said to be injured by the excessive use of candies. It is difficult to understand how sugar can produce any ill effect in this matter by direct contact with the teeth, but it acts injuriously rather by being present in the stomach in such excess that normal assimilation cannot be effected by the secretions of the digestive organs. Again, every one must have admired the beautiful teeth of the old-time negro, whose diet was plain and wholesome and whose digestion, stimulated by a sufficiency of exercise, was as perfect and as regular as clockwork. Now, however, since he chooses his own food and works when he will, his teeth too often cannot be called milk white, unless indeed we mean Jersey milk.

Although, as far as my knowledge goes, there has been no direct investigation of this relationship between the teeth and digestion, it seems clear that such a relationship does exist, and in the future let us hope that some chemical dentist will make some researches in this particular branch of the subject.

Carbolic acid solution is said to be splendid for tempering instruments. M. Levat brings the steel to a red heat and dips it in the solution. It makes the steel harder and more elastic.

F. A. B.

AMALGAM, WHAT IS IT?

As a Filling Material it Possesses Merit, but is Greatly Abused in Practice.

BY B. F. ARRINGTON,
Goldsboro, N. C.

Amalgam (so called) as found on the market, is an alloy, a combination of two or more metals, and becomes amalgam when reduced to a plastic state by the incorporation of mercury, and is suitable and very desirable, under many circumstances, for filling cavities in teeth produced by caries. It is now in the lead of gold or any other filling material, and is daily on the increase and growing rapidly in favor, and is rightly appreciated by many of the best dentists in this and other countries. There has been much written pertaining to the subject; much that is practical, but very much more that is very impractical.

The important and first question to be considered on the subject, is the combination of metals for best results. My experience in the preparation and use of amalgam extends over a period of more than the third of a century, during which time I have experimented extensively with many makes and varied combinations of metals, high grades and low grades, high priced and low priced, some represented to contain liberal proportions of the noble metals, and I have watched and studied results carefully, with a desire to obtain if possible a correct and just estimate of the merits or demerits of the various productions, and to determine, as best I could, the features of excellence of each, and if perfection was embraced in any, and by comparison of the many makes, select the combination that produced universally most satisfactory results, all things considered.

I am now prepared and feel constrained to proclaim in favor of an all-round, every-

day alloy, suitable for use in all cases in which amalgam is admissible and one that promises satisfactory results, almost universally, composed of *tin, silver and zinc*, tin largely preponderating. Such a combination gives all the edge strength that is requisite, bears all the force of mastication, and retains color with freedom from tarnish and discoloration of enamel as well if not better than any alloy known to dentists. The cost is not half that of high grades reputed to contain fair proportions of *noble metals*. This is no guesswork or fancy theorizing, but a plain statement of facts, based upon practice carefully watched for results.

With my experience in the use of various makes of alloy, with results realized, I feel convinced, there is nothing gained in the make-up of alloys by the addition of *noble metals*. They are useless and worthless as to increase of valuable properties in the production of alloys. Metals are never noble after thorough affiliation with mercury; all then come down to a common level, and tin, silver and zinc rule supreme as an amalgamated mass for preservation of teeth. It can be manipulated successfully under fluids (but freedom from moisture is always preferable), and can be contoured as desired, and when finished as should be, will retain smoothness of surface and color as long as any amalgam known to the profession.

Just here, before passing to the subject of preparation of cavities for filling, I feel it is due that I shall state that, judging from the standpoint of my experience and observation, it is not essential for the preservation of teeth that amalgam fillings shall be excessively hard.

The proportions of 100 tin and 50 silver, with appropriate amount of zinc, would, if manipulated and worked into cavities rightly, make fillings hard enough for all practical purposes, even on the grinding surface of molars. If the margins of cavities are

properly and nicely beveled (always should be), so much edge-strength, as is written and talked about, is not essential.

The question of preparation of cavities is an important consideration in the use of amalgam. All frail, weak edges of cavities should be removed; likewise all broken-down, softened dentine. Make slight undercuts (never very deep) for retention of fillings. Never drive metallic posts into the roots to support and hold fillings; they are never needed.

If the pulp is exposed, it will be the safest and best practice in a large percent age of cases, to devitalize and remove the pulp and nerve filaments before filling, then the chances will be favorable for success and permanent comfort. If there is no pulp exposure, but close approach to it, fill the cavity one-fourth or third full with cement or gutta-percha; if with the latter, be careful to condense thoroughly, specially next to walls, then fill the remaining portion of cavity with amalgam, conveying the amalgam blocks or squares to cavity with rough surface conveyors shaped to suit; but manipulate and condense with smooth face pluggers, making rotary as well as direct pressure. Serrated pluggers, like pellets or wads of bibulous paper, can be used for packing amalgam; but with such, best results can never be obtained, and it is best results we are working for, and to obtain on the most conservative and practical lines of action should be the goal of our ambition.

Remove from fillings any excess of mercury, with pellets or pads of crimped tin-foil, press firmly with amalgam conveyors, first upon the center of filling, then quickly and forcibly around the margin and along the fissures, that there may be no excess of mercury left at those weak points; dress surface with moistened siliceous or pumice, manipulated with a soft pine stick shaped to suit respective localities; also pellets of bibulous paper held with pliers may be

used; then wait three or four hours and give the final finish, ever discarding the use of burnishers.

It is good practice to mop the walls of cavities (never the base) carefully with creosote before commencing to fill.

In the preparation of the mass for filling, mix filings and mercury in palm of hand and moisten slightly with dilute sulphuric acid, then grind in wedgewood mortar until every granule of filings is broken down and the incorporation is thorough and velvet-like to touch; replace in hand and wash carefully with water followed with alcohol. Place the mass in a piece of chamois skin and remove excess of mercury by twisting process until there are no visible globules of mercury passing; then flatten the mass by pressure under a flat surface and cut into squares suited to cavity.

The tin, silver and zinc alloy thus manipulated will give almost universally, satisfactory results.

There never will be expansion or spheroiding of fillings, so much talked about. There may be, possibly, slight shrinkage, but teeth will be well preserved and the prevailing prejudice against amalgam will rapidly abate.

I will repeat what I have before said, that almost any alloy on the market (even those said to be composed in part of noble metals, also the *face*, *submarine* and *contour alloys*) can, by proper management and right manipulation, be made to serve a reasonably good purpose in the preservation of teeth.

The chief feature of success in the use of amalgam is the right use of appropriate instruments. It is a deplorable fact, not disputable, that many dentists who make free use of amalgam, and have for years, have never provided themselves with amalgam pluggers. They just stuff the material into cavities as best they can, in a makeshift way, and condense and finish correspondingly, consequently much botch work (discreditable and censurable), and just cause for dissatisfaction and prejudice.

I am personally acquainted with dentists who are first-class manipulators of gold fillings, always fill well and finish beautifully, sparing no pains to make every filling a success, very creditable and to be commended; but now comes a blotting crime they daily commit and for which they merit reproach, for they bring reproach upon the profession, both by omission and commission. I hold that no man in the practice of dentistry has the right to create prejudice against any line of filling material by indifference and unskillful and abusive use of it. They use amalgam freely, and never make any effort for excellence in introduction or finish of material, possibly do not average one fairly creditable amalgam filling in a week or a month's practice, and their excuse for indifference, abuse and failure of creditable work in the use of amalgam, is that it is cheap practice and their preference is for gold. Such being the case (if they are honest), they should abandon the use of amalgam and relegate the use of it to those who are more conservative and will strive to use it rightly and for best preservative effects, in the interest of patients and the profession.

Until the abuse in practice is remedied and a wiser and better course pursued, best results cannot be obtained, and prejudice against amalgam will continue (very naturally) and increase. It is as important, right and proper that cavities should be carefully prepared and every division of the operation of filling and finishing amalgam fillings should be as skillfully and perfectly executed as in the use of gold or any other material, and until such line of action is the ruling principle with all who use amalgam, much bad work will be done.

It is as impossible to insert and finish amalgam fillings properly and creditably without suitable instruments, as to produce satisfactory gold fillings without appropriate instruments. This is a fact that should not be lost sight of. A tooth rightly and well preserved with amalgam is as valuable to

the possessor as if filled with gold, and is as creditable to the operator. The comfortable preservation of teeth and utility are the points to be considered, not gold ornamentation and a glaring display of yellow metal, which in many cases presented, is proof evident of vitiated taste and sometimes criminal abuse on the part of dentists who perpetrate the crime of cutting away healthy enamel for the exposure of gold that will serve as an advertisement.

The practice of every dentist should be, never to expose filling material in cavities; if possible to avoid it. Display for effect has been practiced for some years past, to the disgust of many right-thinking people, and to the serious detriment of the profession, not only in filling, but capping or crowning teeth much exposed.

Amalgam, with all the abuses perpetrated, has served a good purpose and has proven a blessing to many, but, like gold, a curse to some. The use of it is rapidly on the increase, and it is "here to stay." Let us gracefully and openly accept and indorse it as an acceptable filling material, and always try to use it to best advantage in the interest of our patients, poor or rich, and the prevailing prejudice will gradually subside, dentistry will be better served and more appreciated, for it will be advancing upon a more elevated plane of action and usefulness.

The foundation basis of all excellence in our labors and dealings with our fellow-men must be ruled and sustained by true principles of *equity* and *conservatism*, and in no line of service more important to be observed than in the practice of dentistry.

An Old Salt

Being asked by the dentist to indicate the tooth he wished drawn, replied in nautical phraseology, "Dorck, it is the hindmost grinder aloft on the starboard quarter."

A CASE IN PRACTICE.

BY D. D. ATKINSON, D.D.S.,
Brunswick, Ga.

The right superior cuspid which was largely filled, was broken in such a way that the labial line of the fracture was some distance above the alveolus, but there was sufficient root left to support a pivot crown, except that it was so far under the gum as to render such an operation unstable and unsatisfactory, in that it would be difficult to make a strong piece of work under such conditions, and the constant exudation of pus, when the tooth lay in contact with the margin of the alveolus would not only be a source of annoyance to the patient, but could only terminate disastrously to the surrounding tissues and hasten the loss of the tooth. It was therefore determined to bring the root down to the gum margin and crown it in its new position, as other teeth are crowned. This was accomplished by placing a band around the lateral incisor and one around the first bicuspid, and soldering a gold bar across from one to the other, having a hole of sufficient size directly over the cuspid root. Through this a threaded wire was passed and cemented into the root. A nut was placed on the wire below the bar, which, being turned daily, soon brought the root to the desired position, where it was held firmly by the same screw until it was fixed by the process of ossification. A gold-porcelain crown was then made and fitted with the most pleasing and happy effect.

Of course this kind of work can only be done for those who appreciate their teeth to a degree that would suggest to them that the operator must have adequate compensation for his services. If I am pardoned for the assertion, I will say a fee of \$50 is no more than modest in such a case. But how few people would think a front tooth worth that amount! Nevertheless it is fair to say the patient in the case is a member of my own immediate family, and I have to foot the bill myself.

CATAPHORESIS.

When the electrical osmosis mode of medication first made its advent, many supposed the whole thing was discovered at once, and that there would be little to improve upon. Subsequent experimentation has proven that there is room for very deep thought and much scientific research. Cataphoresis is only in its infancy, and will yet be an indispensable addition to our learned art.

Below we give a compilation of the newest and most practical ideas to date.

THE RESISTANCE OF DENTIN.

Dr. Weston A. Price says: I have demonstrated elsewhere, and verified repeatedly that the resistance through the tubuli, accordingly as a cavity is wet or dry, will vary all the way from thousands to hundreds of thousands of ohms. I have measured cavities in dentin after dehydrating, and found them to vary from twenty thousand ohms to one million ohms, and in different parts of the same cavity almost that amount of variation over the surface of the dentin alone, while through the enamel of course these figures would be multiplied by thousands.

THE CURRENT AIDS OSMOSIS.

It is certain that we are not dependent on a difference of concentration for the development of force that carries the cocaine through the development of tissue. Do we know that a medicament can actually be forced into the pulp at all? Yes, in many ways. I have put sulphate of morphine with the cocaine, and after extracting the pulp on a brooch been able to detect the morphine by the nitric acid test under the microscope. - I have killed a frog in twenty minutes with sulphate of strychnine with the current, when neither the current alone nor the medicine alone left for a considerable time produced any noticeable effect. I do not believe the medicine was in any case carried in as the original chemical species, but was changed by electrolysis; and further, with the conditions under which

we use cataphoresis, I believe that the forces upon which we are dependent, are the dissociation of the molecules and the increased energy of these dissociated products. These ions, by their increased energy, by their migration, and by the new chemical species they form, are capable of producing just such phenomena as are produced in cataphoresis, as will be seen by this simple experiment.

SHOULD REVERSE THE POLES IN BLEACHING.

Dr. F. W. Low says: I have made quite an important discovery. So far, we have all been bleaching with the cart before the horse. We have made use of the positive electrode in the tooth. Experiment has demonstrated that a negative electrode should be substituted; this is in accord with the law of electrical osmosis; for obtunding sensitive dentin, we do well to place the positive electrode in the tooth and the negative on some remote place on the body, because the electro-positive element, cocaine alcoholoid, seeking the negative pole in its journey, naturally penetrates the dentinal tubuli, following the course of least resistance. Just as surely will the electrically disrupted free oxygen of the pyrozone, being electro-negative, seek the positive pole.

NEGATIVE POLE ON MUCOUS MEMBRANE.

Dr. Gillette: One point concerning electrodes. I have Dr. Van Woert's set of electrodes, and have used some of them with great satisfaction. The use of the negative electrode against the mucous membrane I found quite satisfactory, but patients came back and said I had burned their mouths. And I have adopted the plan of winding on it cottonoid as a protection. It seems to me we will attain the same results that Dr. Van Woert has attained with that electrode, i. e., reduction of the resistance by simply increasing the size of the negative electrode.

TOO HIGH POTENTIAL CAUSES COAGULATION.

Dr. Van Woert: Wherever the current is of sufficiently high potential, you get a coagulation of the material that is in the

tubuli. The nervous matter, or the fluid that is in the tubuli of the tooth by the contact of the current, becomes coagulated if the potential is too high. The cocaine salt becomes dammed up on the surface, and it takes just so much longer to redissolve the salt to introduce it where you want it. My practice is not to exceed one-fifth of milliampere.

CURRENT MUST BE WIDELY DISTRIBUTED.

Dr. Van Woert: The contact of a small platinum point upon a large body of platinum saturated with the fluid in a large cavity is not sufficient. Many cases are recorded where the operator says I succeeded in anesthetizing one portion of the cavity, but when I got near the cornual surfaces it was as sensitive as ever. To overcome that, some means must be adopted by which it must be diffused over the entire surface; that is best accomplished by laying over the cotton, not over the tooth, tin foil folded heavy to keep it in shape, and the electrode placed upon that so that the current will pass over the entire area upon which you are working.

There is another condition, viz., the danger of pathological conditions following the application of the galvanic current and the cocaine. There is great danger of the devitalization of pulp, the creation of acute pericementitis, and a number of other conditions that you could not foresee, if the potential of the current is too high and the medicament continued too long. If you take a small electric lamp of one or two-candle power, and after making an application to a perfectly healthy tooth, darken the room, you will find that it has exactly the same appearance as a dead tooth, with the lamp under it. The natural color of that tooth does not return in many cases for weeks. I have put off the final operation of gold filling until it did return for fear of the damage I would do.—*Extracts from Dental Cosmos.*

By considering the above conclusions ar-

rived at through recent investigations we deduce the following probable facts:

1. That the resistance of dentin is more than one would ordinarily suppose, and that in forcing a potential, much heat and consequently pain may be produced.
2. That the passage of the current unquestionably aids osmosis.
3. That better results would naturally be expected by reversing the electrodes in bleaching, placing the negative electrode in the tooth.
4. That the less organic tissue intervening between the poles, the less resistance and better results.
5. That to use a current too strong impedes rather than aids osmosis.
6. That the anesthetic effect is obtained more perfectly near the point of contact of the electrode, and to get perfect anesthesia, we must have distribution over the entire cavity.
7. That it is well to always guard against a possible damage suit.
8. That careless and reckless abuse of a good thing may make us regret the use of it.

H. H. JOHNSON, D.D.S.

Macon, Ga.

Copal-Ether Varnish.

Copal-Ether is one of the best varnishes for cavities I have used. When a lining of gutta-percha is desired for the cervical margin, under a cement filling, the varnish enables you to place the gutta-percha firmly and accurately. I use it pretty generally under all fillings. It dries quickly and seems to be impervious to the fluids of the mouth.—*E. P. Beadles, D.D.S.*

Aluminum Points for Root-Canals.

Dr. Dunn, Sr., Florence, Italy, says, a quick and effective root-filling is made with an aluminum point, which can also be used to cleanse the root-canal. The aluminum being soft can easily be bent and nicked at the right spot where it is to break off.

THE
American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Subscription \$2.00 per year; \$1.00 for six months—Including Canada and Mexico; other countries \$3.00 per year.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, October 21, 1897.

**SYNOPSIS OF THE TEXAS
DENTAL LAW.**

The State of Texas has recently enacted a dental law of which we give a synopsis below. It can be considered hardly fair to pass criticism on State dental legislation when we all know how difficult it is to get any legislation at all on the subject. There are so many legislators like the Georgia senator (save the word) who, when a dental bill was presented for enactment, declared that all there is in dentistry are two bones and thirty-two teeth, and that two weeks was long enough in which to learn it.

To practice in Texas, one must have a diploma from a college duly authorized by the law of some State. A Board of Dental Examiners is created to consist of six dentists of *acknowledged* ability who pass upon the validity of each diploma presented for registration.

Any person, whether holding a diploma or not, has the privilege of making applica-

tion for license before said board, and if passing a satisfactory examination, is entitled to a certificate in like manner as a person holding a diploma, and upon the same terms.

Any member of the board can issue temporary license to any applicant, if upon examination he is found qualified to practice. The temporary license is valid until the next meeting of the board.

Here is an excellent clause in the law. It is unlawful for any person to extract teeth, or to perform any other operation pertaining to dentistry for pay, or for the purpose of advertising, exhibiting, or selling any medicine or instrument, or business of any kind or description whatever, unless such person shall first have complied with the law.

The members of the board are appointed by the Governor to serve two years. The Governor also fills vacancies. Each member must make oath before an authorized official to faithfully perform his duties.

Every one engaged in the practice of dentistry at the time of the passage of the act is required to procure from the board a certificate to that effect. Such license or certificate must be registered in the court of records of the licentiate's county. The fee for such a license is fifty cents. The fee for license to begin the practice of dentistry in the State is ten dollars.

Each member of the board receives for his services five dollars for each day actually engaged in the duties of his office.

Persons violating the law are deemed guilty of misdemeanor, and upon conviction are fined not less than twenty-five dollars nor more than three hundred dollars for each offense.

A prominent dentist says the AMERICAN DENTAL WEEKLY is just what is needed; can now get the news in a few days, and interchange ideas and methods within a week, instead of a month or more. This dentist knows what he is talking about.

OBITUARY.

Dr. A. D. Gale died at his home in Brunswick, Ga., on October 10th, 1897, at the mature age of seventy-three years and six months, surrounded by his family.

Dr. Gale was a landmark in the community and a pioneer in dentistry. Was born in New Hampshire and commenced the practice of his profession in Newnan, Ga., in 1847, and afterward practiced successively in Americus, Albany, Valdosta and Brunswick, covering a period of nearly fifty years in active practice.

Like many of those of the old school whose names are illustrious in the history of dentistry, Dr. Gale has left a profound impression upon all who knew him as the writer did. With a ready intellect and sound judgment, he had a heart which responded to every call of love and brotherhood. A thorough gentleman in character and a true Christian by profession, the community sustains a great loss by his death, and dentistry loses a father who had the highest conception of professional prestige and responsibility.

He leaves a large and highly respected family, among whom are Drs. Frank P. Gale of Atlanta, and L. D. Gale of Brunswick, both dentists well known in Georgia.

D. D. ATKINSON.

The President's Picture.

It affords us pleasure to present the picture of the worthy president of the Southern Dental Association. Dr. Beadles is not only a handsome man (excuse the remark, Mr. President), but stands preeminently as one of the leading men in the dental profession. A man of broad culture and fine poise—just such a man as to successfully lead the dental host to a grand victory in St. Augustine, Fla., February 22, next

The liability of teeth to crack under the heat of soldering is greatly lessened by oiling them just prior to investing for the soldering process.

D. D. A.

Chit-Chat.

Barrett, of Buffalo, in his impetuosity and easy flow of speech, forcibly reminds us of Bob Toombs. The resemblance is further emphasized by the fact that Barrett has a head chock full of ideas, and has the courage to express them. He is much beloved and admired in this "neck of the woods," and we look for him to meet with the Southern next spring at St. Augustine.

What's the matter with B. Holly Smith? Nothing! He's all right! Flirts with the boys all night, but at roll-call bobs up as fresh and as serene as a morning glory; reads a lengthy report and makes a speech that would turn a politician green with envy.

For genuine, unadulterated hospitality, Proprietor Harris, of Harris Lithia Springs, South Carolina, is preeminently unsurpassed. His uniform courtesy and prodigal liberality will long be embalmed in the hearts of the South Carolina dentists. Indeed, they are beginning to retrench in order that they may be able to meet with *mine host* again next year.

By the way, if you wish to meet and know a handsome, chivalrous, bright lot of fellows, go to the old Palmetto State.

Marshall, of Chicago, needs no eulogy from any man, for his recent work tells the story of his life more beautifully than could possibly be done by a Gibbon or Macaulay. His book, "Injuries of the Face, Mouth and Jaws," published by the S. S. White Dental Manufacturing Company, to use a common phrase, "fills a long-felt want." While it is especially adapted to the student it is none the less attractive and exceedingly valuable to the practitioner. As a textbook it will easily assume its rightful place in dental literature as a *leader*. It may be proper to state that we were not complimented by the author with a copy of his book, and hence our criticism is entirely spontaneous and gratuitous. Buy the book!

Cook, of Chattanooga, sustained quite a severe injury in the laceration of his left hand by being thrown from a buggy. His friends, and they are legion, deeply sympathize with him, and hope for a speedy recovery.

—
If a dentist of your acquaintance says or does anything that would be of interest to our readers, we will thank you to send it to us. If you have a scheme, an idea, or fact of your own, we'll be pleased to ventilate it in our columns.

J. A. C.

The Dental Engine.

It is perhaps known to only a few of the present generation that the inventor of the dental engine was forced to defend himself against the charge of infringement by the patentee of a sheep-shearing machine. A long, tedious legal contest, however, resulted in Dr. Morrison's favor, the inventor of the engine.

Cement and Porcelain Dust.

Dr. Dunn, Sr., of Florence, Italy, incorporates a small amount of porcelain dust (prepared by pounding old porcelain teeth fine) with cement. The mixture makes a very dense filling, with a hard flint-like surface, and is especially useful on masticating surfaces.

Cocaine Injection.

—
We read and hear a great many things that would be of practical importance if we would try them. I have in my mind that Brother Colson, of Charleston, S. C., told us in the Georgia Convention a few years ago, that cocaine must always be injected under pressure; that is to say, that when injected it must be held under firm pressure by the thumb or finger for a minute or two. The doctor is eminently correct. This accelerates local anesthesia and diminishes the toxic effect of the drug. Try it, and you will be paid for the trouble. D. D. A.

EDWARD PAYSON BEADLES, D.D.S.,
DANVILLE, VA.

President of the Southern Dental Association.

Dr. Beadles was born in Spottsylvania county, Va., November 27, 1863 (near the battle-field of Spottsylvania Court-house). Son of Rev. R. B. Beadles, of the Virginia Conference. Mother was Miss Rebecca Holladay, of Spottsylvania county, Va. Was educated at Randolph Macon College. Studied dentistry at the University of Maryland, graduating in 1885. Settled in Danville, Va., same year. Was president of the Virginia State Dental Association in 1892-93. Served three years on State Examining Board. For two years was Corresponding Secretary Southern Dental Association, being elected from that office to First Vice-President at Asheville in 1896. Has travelled some. Made a tour of the world a few years ago, sailing from California to the Sandwich Islands, thence to Samoa, New Zealand, Australia, India, and through Europe. Was married in 1892 to Miss Annie Boisseau, Danville, Va. Has always taken a great deal of interest in association work.

Band-box Crown.

A lawyer called upon a dentist not very long ago with a "bandbox crown" in his vest pocket, with the statement that while it came off of its own sweet will and accord, without any act or persuasion on his part, he was not altogether certain that he was ready to prove, by either evidence or argument, that the crown should be replaced on the superior bicuspid from which it originally came; since the real facts in the case were that the aforesaid "bandbox crown" gave him more comfort in his vest pocket, and was probably just as ornamental in its place of seclusion as it would be on the said bicuspid.

The dentist, upon examination, found that the tooth from which the crown came had only a small proximal cavity (which could easily have been filled), and the only preparation it had received for a crown was the cutting off of the prominence of the cusp to receive the "bandbox." He filled the cavity and restored the cusp at one sitting, making a neat, substantial and comfortable piece of work.

"If I ever do get a chance at that fellow," said the lawyer, "I'll make him think he is the only dentist in town doing crown and bridge work."

Extracting Roots.

Did you ever break off a lateral incisor or bicuspid, notably the first bicuspid, or any other tooth so far under the alveolar process, that it seemed impossible to again grasp it with the forceps? I suppose we have all done that, and had no end of trouble extracting the root. It is my practice in such cases to inject cocaine, and with a sharp bur cut away the process on either side of the root as far as desired, when the root can be grasped without any trouble whatever, and easily removed. Under the local anesthetic this operation is a painless one.

D. D. A.

Cocain Solutions.

A convenient way to make cocain solutions of a known strength, is to get a two-drachm vial from a drug store, have the druggist to test the capacity of it by putting exactly two drachms of water into it and marking the line of the surface of the water on the bottle. Then with a disk on the engine mark the points on the bottle of 2—1— $\frac{1}{2}$ and $\frac{1}{4}$ drachms. You then have a reliable and convenient graduate. 2.28 grains cocain hydcl. to the drachm of water yield a four per cent. solution. This may be obtained in tablets ready for use, and can be dissolved as needed— $\frac{1}{2}$ tablet to 1 drachm, 2 tablets to 2 drachms, etc.; likewise one tablet to 2 drachms will yield a 2 per cent. solution, 2 tablets to 1 drachm an 8 per cent. solution. These kept constantly on hand will enable the operator to have a fresh solution for each case. D. D. A.

Silver Nitrate and Sodium Chlorid

Dr. W. W. Walker, of New York, during his vacation in Europe this summer, attended the Dental Association of France, and reports that a dentist of eighteen years' practice presented several children whose temporary teeth he had treated with a saturated solution of nitrate of silver in the cavities, adding sodium chloride, which he claimed precipitated *chloride of silver*, and that this became *insoluble*. If this is true, why would it not be good practice to observe this precaution at the cervical margins of cavities before filling?

Oxygen Gas for Treating Abscess.

In the London *Lancet* is reported beneficial results from treating abscess and abscess cavities with oxygen gas. The gas is allowed to flow into the cavities from the cylinder. Some have been trying it in treating antral disease, and report much satisfaction from its use.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., OCTOBER 28, 1897.

NO. 7.

THE HIGHEST AIM.

BY E. P. BEADLES, D.D.S.,
Danville, Va.

In this day of materialism it is hard for many men to rise to a truly professional standard. The idea has crept in that the most successful man is the one who accumulates the greatest number of dollars, regardless of methods. The difference between a tradesman and the really professional man is that the former makes the dollar his highest aim, the chief end; while the latter makes the service he can render to humanity his highest aim, the chief end; and regards the money he receives as of secondary importance, or as simply a means to an end. The professional man would rather render his services in a professional manner and receive no fee, than to render them in an unprofessional manner and receive money. This, to some, may seem to be merely an ideal, and not to be found among the men of any profession to-day. This is a mistake. We have professional men in dentistry, law and medicine. What the proportion is the writer would not undertake to say; but in just the proportion that these professional men are to be found, so in the same proportion is that profession reaching its highest aim.

The tradesman nor the "professional" advertising writer cannot understand these things. They are above them. When a man refuses to advertise when it is shown him that he can add a few dollars to his slim purse, the "ad. writer" looks upon

him as a wild sort of idiot, not knowing that this man has a peculiar kind of honor that neither a few dollars nor many dollars can buy. The dental profession is beset with more temptations along this line than others. There is more intimacy with the trade side. The two come closer together. We have had to depend heretofore largely upon the tradesman for our literature. But everything cannot be accomplished at once. In time there will be professional literature and trade literature. We will be able to separate the two, and the sooner the divorce is accomplished the better it will be for the purely professional. The trade is a necessity, and the tradesmen are gentlemen; but it cannot be expected that they should see this matter from a professional standpoint. Nor can it be expected that they will refuse to print advertisements which tend to the leading astray of the unwary. The remedy must be within ourselves. There should be no demand for this sort of thing. We should read our own literature and go to the catalogues for the wares we need.

We are beset along another line. We are tempted by our patients to do unprofessional things. They wish to dictate the manner of certain operations. They claim the right to say what we shall do. This is not true of other professions; but we are young. We will, in time, command greater respect—i. e., if we aim for a professional plane. We must have the will-power to assert our authority and the nerve to see a patient walk out in search of a less scrupulous man. This means dollars lost at the

time, but to return in the future with added respect and dignity. The public will have no higher regard for our profession than we have for it. A professional man never haggles over the cost of his services. He never allows himself to be "jewed"—this is left for the shops and the "shoppers."

The whole matter may be summed up in the one word "education." A profession will never rise above its standard of education. The public judge us largely by our education *outside* of dental books. We can never be what we should be until we have a profession made up of men who have had academic training. The best medical colleges require at least A.B. before matriculation. We have many notable men who have not had educational opportunities; so has every other profession, but these are the exception, not the rule.

Our forces are schools, professional literature and associations. We know that there are too many schools, not enough good literature, and too little interest in association work. Are there enough men who have the interest of dentistry at heart to change the order of things?

CAPPING PULPS.

BY D. D. ATKINSON, D.D.S.,
Brunswick, Ga.

This is an operation very little in favor, even in these the closing days of the enlightened nineteenth century, and why? Is it not true that a tooth with a healthy pulp is better than one from which it has been removed? Is it not true that, although the jaw tolerates a devitalized tooth, and to such an extent that it is often spared to a long and satisfactory service, nevertheless, a retrograde movement goes on from the date of its devitalization, which, in time, will culminate in the loss of the tooth?

It will be agreed that the tooth with the living pulp is best, and that a retrograde metamorphosis is in process in every case

where the pulp has been extirpated. It may be very slow in progress and may not, even in a lifetime, reach serious consequences, but in a majority of the cases it does, and the loss of the tooth may be attributed to that cause. The general and accepted practice, even among those of the best class of dentists, is to apply arsenic or some other agent for its devitalization as soon as an exposed pulp is discovered. This is done not because they believe a pulpless tooth better than a living one, but because of the prevailing idea that a pulp already exposed cannot be successfully capped and retained, which, to an alarming extent, is true; but to my mind the fault lies in the fact that the dentistry of the nineteenth century is not quite up to it, and not to the impracticability of the operation. Dr. J. Y. Crawford says, in substance, that when the dentin fails to show sensitiveness it is a sign that the pulp is not performing its function and cannot be of further value. This, from experience, would seem to be a philosophic conclusion; but isn't it possible that the day will come when this idea will be disproven? That dental science will be able to divorce the pulp from any tooth structure with which it is no longer in harmony, and let it go on performing its function in all structures not involved in the caries? I think it will.

Dr. R. B. Adair has given several very interesting papers on this subject, taking the stand that pulps should not be destroyed, and sustains his theory by making it his practice to cap nearly every exposed pulp, and successfully.

It is not my purpose to teach methods in this paper, but will drop one hint which will be of value to any one who will try it. Iodoform powder made in paste with creosote, and flowed gently over the exposure, protected by cement applied over it in the same manner, comes as near perfection as a pulp-capping as anything in my experience or observation.

I believe that the day will come when scientific dentistry will look upon the promiscuous devitalizing of pulps with a degree of intolerance not now imagined, and that pulp-capping will be the established and successful practice.

JUST THINK.

BY DR. H. C. HERRING.

I watched an intelligent jeweler—a graduate of a horological school—examine a collar which had been neatly screwed on a mandrel. He decided it had been “shrunk on,” and nothing could change his opinion. He began tapping and finally driving until the threads appeared. Of course the entire piece was spoiled.

I stood by a blacksmith’s forge and watched a graduate of a literary college make several attempts to weld two pieces of iron. I suggested that if he would use borax the pieces would stick, “D—n borax,” said he, “it’s got to stick.” But it didn’t stick.

Just such cases could be cited *ad infinitum* where intelligent people, who after blundering over the most trivial matters, at once begin to dredge every emporium of knowledge for light, when if they would only “just think,” the problem would be solved.

Apodos: I have noticed going the rounds, words of caution and even condemnation in the use of cocaine, eucaine *et al.*, for the painless extraction of teeth, in that they cause ugly ulcers.

I take occasion to defend these drugs against this slanderous assault—in short, any drug when used hypodermically, whenever it is assailed for having caused an ulcer at the puncture of the needle. “Just think” of the danger from a puncture of a rusty nail.

My friend, you are using a rusty needle. Say you deny it? Well, then, your attention is called to the fate of Ananias. Keep a supply of points and at the first appearance of rust, throw it away. Yes, use bright clean points and escape the maledictions which have very justly been heaped upon other things.

DIDACTIC TEACHING.

BY L. P. HASKELL, D.D.S.,
Chicago.

I have been much interested in a paper on this subject by Dr. J. S. Marshall, read at the late meeting of the Southern Dental Society. In it he takes strong ground against didactic teaching in dental colleges. I most certainly agree with him, at least so far as the teaching of prosthetic dentistry is concerned, and can speak from personal knowledge, after seven years’ experience in two dental colleges and seven years in a postgraduate school.

I have long claimed that prosthetic dentistry cannot be taught in the lecture-room. There must, of course, be a few lectures on general principles, but no amount of diagrams, models, etc., will give the student a correct, tangible idea of how to do the thing. Even in the laboratory the student labors under great disadvantage in being taught in classes, and especially large classes with but two or three demonstrators, and they often inexperienced men. In no place in the dental college is experience so much needed as in the laboratory.

With my seven years’ experience in a postgraduate school, where *all* the instruction is given in the laboratory, in detail, step by step, and the student looked after to see that he follows instructions, one realizes that this is the only successful method of teaching this branch of dentistry. Often is the remark made, “I have learned more in one month than in the entire course in college.” Of course I fully realize how difficult it would be to carry out this plan with the large classes in colleges; but if the experienced lecturer who, if capable of *doing* what he teaches, could spend a good part of his time *demonstrating* in the laboratory, instead of haranguing in the lecture-room, the student would learn far more, and less of his valuable time be wasted.

CRYSTAL MAT GOLD AS A TOOTH-PRESERVER.

An Ideal Gold Filling When Combined with Cohesive Strips.

BY H. R. JEWETT, D.D.S.,
Atlanta, Ga.

Soft gold has always been regarded by many dentists as the best form of gold for preserving tooth-structures. We frequently find on having to replace soft-gold fillings, after possibly twenty or thirty years of good service, that while the gold is very soft and crumbling, the tooth-structure, as far as covered by the gold, is perfectly preserved.

There can be but one reason for this, and that is the perfect adaptation of the gold to the walls of the cavity throughout. A gold leaf that can be converted from a non-cohesive to a cohesive foil, simply by annealing it, is not a strictly soft or non-cohesive gold, and cannot be so perfectly adapted to the walls of a cavity.

While it is true that the introduction of cohesive gold was a step in advancement in dentistry, in that we are enabled to rebuild lost tooth-structure that could not be done with soft gold, it is a question yet to be decided whether or not it is possible to make it as much of a success as a tooth-preserver as soft gold has proven. The combination of the soft and cohesive has been resorted to by some dentists to take advantage of the good features of each, as well as to eliminate the objections to both. The imperfect union of the two golds in the same cavity, however, has given rise to some objections; reducing the strength of the knuckle or contour filling at the point of union.

The crystal mat gold, as now placed upon the market, is a form of gold which answers the demands of both soft and cohesive. When worked as a soft gold in the commencement of a filling, with hand pressure it can be as perfectly adapted to the walls

of the cavity as any soft foil, without any tilting or rocking whatever; and after being well condensed (by hand pressure or mallet) will leave a perfectly cohesive surface without having been annealed.

In preparing the cavity for mat gold there should be no retaining points, and only slight groove or undercuts at the proper places to securely anchor the filling. A piece of mat gold of sufficient size to extend from one retaining groove to the other should be placed on the floor of the cavity; this should be pressed into position with a coarse-pointed instrument and condensed with finer pointed instruments, hand pressure being used. In going from one side of the cavity to the other with the pressure, you will note that the portion of gold first placed into position does not roll up and leave the walls. Repeat this with layer after layer, until the foundation is well laid and the filling anchored. It may then be completed with the automatic or hand mallet, using either crystal mat or cohesive foil.

As the mat gold can be so nicely adapted to the walls of the cavity, it should be used until the margins are reached, from which point the filling may be finished with cohesive strips, using the electric, automatic, or hand mallets.

The only objection urged against the use of mat gold for completing the filling is that it is not firm at the margins. This you will find true if you use it at these points without annealing it, or if you use too much mallet force. Passing mat gold through the flame gives it the same toughness as possessed by cohesive foil.

The most convenient form and the nicest working mat gold the writer has yet found is the No. 9 strips, put up by the S. S. White Manufacturing Company. Being in strip form, you can readily estimate the quantity used, and can, with the gold pliers, break it into the desired length for different sized cavities. This special form also works

more uniformly and with less tendency to crumble.

Besides the advantage of being a great tooth-preserver, mat gold can be worked in one-third the time required for working cohesive strips.

Our British Cousins.

Ever ready to criticize, and reluctant to adopt anything American, our British cousins are at present involved in a wrangle over some recent changes and additions to dental terminology.

As a characteristic sample, we note an extract from the remarks of Mr. Tomes, delivered at a meeting of the Odontological Society of Great Britain:

"As a teacher he did not like fresh terms. The advocates in America of the tri-tubercular theory of the genesis of teeth and the Kineto-genesis, and all the various other sorts of words they had invented, had become a nuisance. Some of their terms had obtained currency while it was still doubtful whether the facts that those terms intended to embody were true."

Such wholesale denunciation is not argument, and hence not conclusive. "As a teacher," we naturally expected something more specific from the distinguished gentleman. Cousin Tomes should familiarize himself with our laws and customs. It is the high prerogative of every American citizen to coin his own words, and everybody accepts them without the proverbial grain of salt.

J. A. C.

The Old Pivot Tooth.

In cases of emergency, or for economical reasons, the old style pivot tooth can be quickly placed in position and made reasonably secure, by using cement in the crown and root, observing the precaution to keep the wood perfectly dry in order to insure union with the cement.

FORMALDEHYD IN CONNECTION WITH ESSENCE OF GERANIUM IN DENTAL THERAPEUTICS.

In a paper recently read at the Society d'Odontologie, at Paris, M. S. de Marion spoke very interestingly of his experience in the use of formaldehyd in connection with the essence of geranium in the treatment of dental caries.

The choice of a good antiseptic in the treatment of caries of teeth, he says, is yet one of the main prejudices of the dental profession. None of our antiseptics have given entirely satisfactory results, because the physical structure of the teeth prevents the entering of same under ordinary circumstances, the dentin being saturated with saliva and serum. Experiments have proven that creosote, thymol and many others do not combine with water or saliva, but are simply suspended in the same as little globules and cannot therefore act as antiseptics.

A good antiseptic must be soluble in water, it must be diffusible in order to sterilize the liquid contents of the dentinal canaliculi, and lastly, it must have no bad effect on dentin. Formaldehyd is the first antiseptic having each of these properties. Its action is as follows: All animal matter, in this case the pulp, disintegrates in the presence of air and its nitrogen and carbon form ammonium salts and carbonates respectively. As chemical disintegration goes on, the ammonium salts being very diffusible, saturate the dentin. Formaldehyd brought in contact with the disintegrating pulp has the tendency to form compounds with ammonium and the carbonates.

As a result of it, formaldehyd is chemically and antiseptically neutralized and absorbed. The process of disintegration goes on until the disintegration is complete by addition of more formaldehyd. Then its antiseptic action on the pathogenic microbes begins.

The sterilization of caries is a perfect one, but somewhat slow. M. S. de Marion has had excellent results with the addition of the essence of geranium to stop disintegration of putrid matter at the beginning. All ethereal oils, with exception of this essence, cause soreness and pain of the peridental membrane. Essence of geranium put on the tongue has no burning effect, it has a mild and agreeable smell, stops caries instantly and diminishes the necessity of applying formaldehyd too frequently.

M. de Marion's antiseptic treatment of putrid root-canals is as follows: He opens the pulp chamber as usual and cleans that as well as the canals of all putrid matter. Formaldehyd is then introduced on shreads of cotton and evaporated with a heated silver wire. This treatment is repeated two or three times at same sitting. A temporary dressing is now made of cotton shreds saturated with formaldehyd and geranium and the cavity is closed air-tight, with wax or gutta-percha. Two or three days afterwards the same treatment is repeated. The essence of geranium serves to find out any putrid matter; left in contact with the same, it changes its mild and agreeable smell, and only when the latter is pure a permanent filling can be inserted.

F. A. B.

For Neuralgia.

The *Dental Practitioner* gives this as a good local application in neuralgia:

Menthol.....	grs. xv.
Guaiacol.....	grs. xv.
Alcohol abs.....	drs. ivss.

Apply over the seat of the pain with a brush and rub in with gentle friction.

Don't forget that from others you have learned much that is valuable to you in every-day practice, and that you ought to pay back by giving something in return. Just squeeze the sponge and see what will run out.

GOOD JUDGMENT A REQUISITE.

BY CHAS. A. BLAND, D.D.S.,
Charlotte, N. C.

The wonderful advancement of the dental profession and the recognition it is gaining as a science cannot fail to flatter our vanity; nevertheless we must not surround ourselves with an unsurmountable barrier of egotism. If we think there is nothing more to develop and allow our energies to be lulled into repose, the result will be complete stagnation. We all have our hobbies. One thinks his method of treating and filling root-canals the only one guaranteeing success, and he is on his feet in a moment to totally annihilate any who dare to take issue with him. Another points with proud satisfaction at the gaudy crown-work he has placed in the mouth of some young girl. When the unfortunate smiles, the scintillating splendor of her beaming countenance makes one think of the richness of the Klondike. The jeweler who thus destroys the beauty of the human face undoubtedly has considerable skill, but he does not possess that cardinal virtue, "good judgment." We should not only study utility but esthetics; to conceal artificiality should be our aim. Let us shake off the shackles of self-conceit and proceed untrammelled to the upbuilding of the great profession, dentistry.

I consider the establishment of THE AMERICAN DENTAL WEEKLY a great thing for the Southern dentists. Through its columns ideas may be exchanged and opinions ventilated. All this tends to broaden our conceptions, and makes us have a high regard for our professional brothers. Let every dentist in the Southland contribute to the support of this paper.

WANTED—To know if some one can give us the facts touching the practice of dentistry in the two armies during the late war between the States?

SUBMARINE GOLD.

While this German product is hardly known in our country, it seems to be used daily more and more in the Fatherland. Many points for and against it are being brought out of late.

Submarine gold was put on the market by Dr. William Herbst, Bremen, a year or two ago. In a recent paper read at the International Congress of Physicians and Naturalists, this noted German dentist endeavored to bring forth the superiority of his gold in the filling of central, approximal and fissure cavities in the presence of saliva.

Dr. Herbst claims that by the hand pressure applied in filling, there is no possible chance for any saliva to remain; at the same time it would not do any harm if there was some left, as it has been proven that no cultures can be raised on pure gold, and that bacteria cannot live on the bottom of a good gold filling.

It may be well to describe the method of filling with submarine gold.

Although manufactured in No. 60 and 120 thickness, it is exceedingly soft. For use it is cut in squares of the size of ordinary pellets, which are moistened with water to make them more pliable and easier to be wedged in between the mass of gold.

The cavities are prepared as for amalgam fillings, no undercuts or pits are necessary. With a hand plugger twenty or thirty of these square pieces are taken up at once and placed with a good pressure in the center of the cavity, holding the ends of same until all are brought down well. Smaller quantities are now wedged in between this and the walls, starting at one point and going all around. This work is to be continued till it is impossible to place in more gold and an impression cannot be made any more. The rough and uncovered surface is to be smoothed now with steel or stone polishers, applying a good pressure.

Should, during the filling, the gold fail to

stick or wedge, try with less gold, or start at another place.

Submarine gold can be annealed and so made cohesive for the filling and contouring of front teeth.

Dr. Herbst's gold certainly must be a wonderful filling material, if it has all the properties claimed by its inventor. The strongest point in its favor seems to be the undesirability of the use of the rubber dam, and its softness and pliability, which makes the work very quick.

Would it not be advisable to give it a fair trial and then judge? F. A. B.

RETAINING APPLIANCES.

This subject was brought before the American Academy of Dental Science. We make some extracts from Dr. Milton Smith's remarks in the *International Dental Journal*:

There is no question but what the best retaining appliance is a fixed appliance. To illustrate this you take, for instance, a case of protrusion of the anterior teeth which have been brought into line. If an appliance can be made by putting bands on the molars and cementing them to place, with a wire running from the molars around the front of the teeth, the ends being soldered to those bands, you have the ideal retaining fixture; but it is rarely that you can use these fixed appliances, not because it is a mechanical impossibility by any means, but because patients object to retaining appliances that cannot be removed for certain important society events.

Of course, it should be the aim in making a retaining fixture to have the smallest possible contact with the teeth in order to prevent the possibility of decay.

In regulating cases where we have simply moved an instanding incisor out over the lower incisors, many times the occlusion itself is sufficient to retain the tooth in position, but sometimes you will find that after the correction of the irregularity your incisor still drops back a little to an occlusion

with the lower. Now, such a case as that could be nicely retained by a simple fixture, say a band around the tooth with wire projections resting on the adjoining teeth, and yet you will find it is the desire of most patients to avoid wearing such an appliance, and your only recourse, therefore, is to again resort to an application of the vulcanite plate, with little wire projections behind the tooth, keeping it from moving back.

There is another point in regard to this matter of retaining appliances of which we often lose sight, and that is the tendency of regulated teeth to return to their old form of irregularity. There seems to be a natural tendency in that direction which, in some cases, it seems almost impossible to overcome. The teeth are moved into place; retaining appliances are put on and worn by the patient for a year or more, and then taken off, and back the teeth go to their old position, and the entire work is regarded as a failure, when really the only error was in the fact that the retaining appliance was removed too soon. In other words, there are many cases of corrected irregularities where the apparatus for retaining the teeth in their changed position should have been a retaining appliance for life—a permanently fixed appliance which should be allowed to remain in the patient's mouth. That is what we lose sight of. If I understand the object of our work in prosthetic dentistry, it is in part to make people better looking. If it is professional to extract natural teeth for the purpose of supplying artificial teeth, and improving a person's appearance, it is certainly quite as professional to make a fixed retaining appliance by cutting into the teeth and anchoring them by wires to hold them in the desired position, with the same end in view. There are cases where we are forced to do this. Take, for instance, a case where we have a protrusion of the incisor teeth in a patient somewhat advanced in years, say about thirty, and you have drawn them

back into line and wish to retain them. The usual method of retaining in such a case is to drill into the palatal surface of the teeth and set wire retainers which rest on the adjoining teeth, so that it is impossible for those teeth to move out. Now the tendency of those teeth to move out, especially in a person of that age, is something astonishing. I recollect a case of the kind where two central incisors had been drawn back and wire retainers, resting on the laterals, were put in, supposing the laterals would be sufficient to hold them. They not only moved forward themselves, but they took the laterals along with them. A new appliance had to be made for correcting, and the same kind of a fixture was made for retaining, except that this time it was extended to include the cuspid tooth, and there was no further trouble.

Nine Shillings Per Dozen.

For many reasons quite well known to the intelligent reader, the impression obtains that England, aside from the enjoyment of her "roast beef and plum pudding," also boasts of the luxury of a "pure and undefiled" dental profession. This is purely an assumption, however, as the following advertisement, taken from the "*Chemist and Druggist*," London, will painfully (?) attest:

"Teeth extracted whilst you wait at 10½d. each, or 9s. the dozen"!

This would scarcely be found duplicated even "on the Bowry," where the code of ethics is scrupulously unobserved!

J. A. C.

WANTED.—Thoroughly capable assistant for Paris, France. Must be willing to prepare for and pass, as rapidly as possible, the government examinations, during which time he would not more than pay expenses. There is an excellent field in France for one who is willing to take the trouble to obtain the license to practice. Address AMERICAN DENTAL WEEKLY.

THE American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription \$2.00 per year; \$1.00 for six months—Including Canada and Mexico; other countries \$3.00 per year.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, October 28, 1897.

Appointments by Governors.

The danger of having a governor to appoint members of an examining board is shown in two cases already. The Mississippi Dental Association recommended some names for the governor to select from. He went outside and appointed one man who had never attended but one course of lectures. It has been said that it was done so as to control political patronage from a certain section of the State. Knowing somewhat of that governor, we are prepared to believe this a fact.

Now comes a similar case from Connecticut, where the governor, for political effect, removed a highly esteemed graduate member of the board and appointed in his stead a young non-graduate. And so it will continue so long as the governor of a State has the appointing power. Texas will soon have the same complaint to make, as its new law allows the governor to make the appointments. If we are not mistaken,

the State of Illinois has had the same trouble. The Pennsylvania law, of which we gave a synopsis in the WEEKLY a few issues back, has provided against this trouble. The Georgia law, as it stands, guards against it, and so do other State laws. Such power should never be given a governor, for the majority of State magistrates are nothing more than political bosses, and will turn every appointment to a political end.

Aside from political preferment, some governors are like other ordinary people who believe that he who can make a rubber plate and put in an ordinary filling is competent to fill the position of dental examiner.

How to Establish a Dental Practice.

In an article published in the *Dental Register*, by Dr. N. C. Hoff—How to Establish a Dental Practice—the subject is elaborately discussed; and if the line of procedure suggested by the author could be perfectly carried out, it would in every instance lead to ultimate success. The following extract we clip as one of the strongest points presented, which would not only lead to the upbuilding of the individual practice but also to the increased interest in societies, which means the elevation of the profession at large:

An educated person will have decided advantage over one whose entire store of knowledge is confined to his profession, or is limited and characterless. Patients respect and want culture in their dentist, as they expect and seek it in their preacher, doctor or lawyer. The broader a man's knowledge the wider will be his influence professionally. What are the essentials? Every dentist who hopes to get and retain the confidence and support of his patients must be well qualified to perform any and all ordinary service in a good and substantial manner. This implies a thorough

course of training in all the technical functions of dentistry, as well as such theoretical study as shall be necessary to qualify him to correctly diagnose diseased conditions and to apply proper and adequate remedies for relief. To obtain this degree of proficiency he must set a high mark for attainment—one that cannot be reached by a three years' or five years' course of study in any dental educational institution, but which shall only be reached after years of careful and painstaking effort to do the best possible for every case undertaken; simple as well as difficult cases should be subjected to the closest scrutiny that nothing of value or interest in any case may be overlooked. The early establishment in one's mind of a systematic method in making diagnoses, and the treatment of every case by principles rather than without interest or mechanically, is of the utmost importance. We always find that the man who gets thus interested in his own work and becomes attached to his calling, and finds himself appreciated by the community in which he lives, begins to think of his professional brethren and he wants to know what they are thinking and how they are getting along with their work, and he subscribes for the dental magazines and begins to read, and then he wants to see these men who write and talk in society meetings; he wants to ask them some questions that he finds difficult to adjust, and so he joins his local, state or national dental society, and he attends the meetings as religiously as he does his church prayer-meeting, and he feels in duty bound to take his part in the dental meeting just as in his church prayer-meeting, and thus he gets interested in his profession, and his patients know it without any announcement on his part through the press and are glad of it and proud of their dentist, not because he announces in all the local papers that he is such a big man away from home—that he has been summoned by the dentists in national assemblage to tell

them how he does it—but because they are glad that he is broad and liberal enough to take an interest in his calling and is willing to sacrifice his time and money to get on in the calling to which he is devoting his life.

If we expect to attract intelligent and discriminating people professionally, we must be the embodiment of the highest prevailing or known ideas of the profession; we must actually live the life, not theoretically nor ostentatiously, but honestly and conscientiously.

The Blue Pencil.

The little simple things that you have grown accustomed to, and which seem almost too simple to tell about, are often of great value to the eager dentist. Here is one from Dr. Barrett, in the *Dental Practitioner*, on so simple a thing as a blue pencil, which will be appreciated by many:

A blue or red aniline pencil is a great convenience to the dentist, in either the laboratory or operating-room. It serves to mark a cast for relief, or for the borders of the plates, the positions of the teeth, etc. But its greatest usefulness is found in articulating and grinding artificial teeth, crowns, fillings, etc. The surface to which a crown or filling is to be adapted is heavily marked with the pencil, and the occlusion then made. The pencil mark is transferred to the exact point to be ground off. It is quite as effective and much more convenient of application than the articulating paper sold for that purpose. Keep an aniline pencil constantly within reach when at your work, and it is surprising how often it will be found useful.

The nice notice of the WEEKLY by Dr. Barrett in his able journal, the *Dental Practitioner*, is much appreciated. The doctor is one man who is not afraid to speak what he thinks.

WANTED.—Position by a good all-round man. Address "Denture," care AMERICAN DENTAL WEEKLY.

Paralysis After Chloroform.

Tasse has recorded in the *Therapeutic Gazette* two cases personally observed by him, in which paralysis followed chloroform narcosis. He believes that such paralysis arises from several causes: First, from the position in which the patient is lying, whereby pressure is exercised upon a supplying nerve, or as a result of tractions on the arm or leg of a violent nature. Second, the employment of impure chloroform, which seems capable of poisoning the nervous system and producing such paralysis, at the same time developing transient or permanent albuminuria. He also believes that in some rare instances the chloroform renders the patient susceptible to microbic intoxication, with secondary paralysis from this cause.

Antral Diseases and Pyorrhea Alveolaris.

We make some extracts from an article by Dr. J. M. Whitney in the *Pacific Stomatological Gazette*, on a subject that is of much interest to our readers:

There is one cause of antral trouble, that is, pyorrhea alveolaris. He has been much interested in examining the crania of ancient Hawaiians. He has given many years to the study, and has examined many thousand crania; has found nearly all the diseases which we to day find in the mouth. Among them he has quite a number of specimens which indicate that antral trouble was caused by pyorrhea alveolaris cutting through into the antral cavity. It was not until some years ago that he found his first case that was produced in this manner. Since then he has seen one or two others that have been directly caused by pyorrhea alveolaris destroying the process until it cut through into the antrum. He has been rather heroic in his treatment, making the opening so large that he could readily pass his finger into the antrum. In that way he would have plenty of room to

remove the trouble by the curette, and, also, he would get plenty of drainage. Drainage is of great importance. Another thing which he has found of very great service, is that of spraying under pressure. He has used as high as eighty pounds to the square inch, throwing the medicine in with that pressure, with excellent results. It has been stated: be very careful of any irritant; that is well put in. He had a case during this last year where he had treated the antrum for some time, and finally thought he would try iodine, and found that one application of iodine entirely relieved the trouble, which he had been over three months in treating. It was a severe treatment, but it did the work.

Root Perforation.

A clever writer has said that the best treatment for perforation is the preventive treatment. Dr. Register, in the *International Dental Journal*, says:

If in reaming canals we perform the operation very carefully, it will be found that as the instrument approaches or touches the cementum, the patient will give evidence of pain; if the patient be previously directed to state when sensation occurs, perforations should never occur. When he finds that the instrument (the reamer) has invaded the cementum, he sterilizes the canal thoroughly, and is careful to exercise no pressure in placing the root-filling.

Those cases of perforation near the apex which he has encountered, he has treated after one method. Pack in the canal, and against the pericementum at the perforation, a small quantity of salol, and over this place a cone of zinc phosphate. Of course, the salol disappears, as it always does, after a period when used as a canal filling; but he believes that it performs its office as an unirritating antiseptic while it lasts.

One of the best ways to treat a perfor-

ated root, when the canal is accessible, is to whittle a piece of wood to the length and size of the canal, trying it in to ascertain that it does fit; then make the wooden point a little smaller and wrap around it, to the depth of the canal, a piece of very thin, well annealed platinum foil. Dry the canal and coat the platinum with a thin varnish; then push the platinized wood point to the end of the canal, and gently remove the wooden point, leaving the platinum in the canal. Blow in hot air to hasten the hardening of the varnish, and then proceed to fill.—ED. AMERICAN DENTAL WEEKLY.

Earl Chesterfield

In one of his many letters to his son, says: "Pray send for the best operator for the teeth, at Turin, where I suppose there is some famous one, and let him put yours in perfect order, and then take care to keep them so afterwards yourself. You had very good teeth, and hope they are still; but even those who have bad ones should keep them clean, for a dirty mouth is, in my mind, ill manners" May 15, 1749.

In a letter, dated November 12, 1750, just before his son reaches Paris, where it is the purpose of Earl Chesterfield to have him complete his training in court etiquette and diplomacy, the Earl says: "A dirty mouth has real ill consequences to the owner, for it infallibly causes the decay as well as the intolerable pain of the teeth, and it is very offensive to his acquaintance, for it will inevitably stink. I insist, therefore that you wash your teeth the first thing you do every morning, with a soft sponge and warm water, for four or five minutes; and then wash your mouth five or six times. *Mouton*, whom I desire you will send for upon your arrival at Paris, will give you an opiate, and a liquor to be used sometimes."

This famous courtier, orator and wit, midst the exacting duties of his high posi-

tion, found time to caution his son regarding the proper care of his teeth!

If every man in our day who imagines himself a wit and an orator, would condescend to give similar advice to his offspring, verily, verily, every poor dentist could boast of a Klondike of his own!

J. A. C.

Lung Surgery.

Lung surgery is becoming quite common. The *Maryland Medical Journal* says the subject received considerable attention at the Moscow Medical Congress. Here are a few cases reported:

In septic operations (tubercular cavities, abscesses, bronchiectases, foreign bodies, gangrene, actinomycosis) 65 per cent.

Primary lung tumors have not yet been operated upon. Four out of seven cases of pneumotomy for sarcoma of the breast which had spread to the lung, healed.

Seven cases of lung wound, treated by removal of blood-clots from the pleural cavity, and a suture around the bleeding lung site, all recovered.

Pneumotomy for echinococcus gave 90 per cent. of healing.

Dr. Tuffier in one case sought to remove a focus of tuberculosis in its initial stage, as if it were a tumor, by the knife. He succeeded in healing, as did Lowson and Dogen, each in one case.

If you have dropped upon some new idea, material or instrument in your office practice, or from conversation with a brother dentist, write it out and send it to the AMERICAN DENTAL WEEKLY. It will do you good, and how many others may be benefited you could not tell. The exchange of ideas builds up professions as well as individuals. Societies have done much to elevate the dental profession upon this plan of exchanging ideas, but only a small per cent. of dentists who read the WEEKLY attend societies.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., NOVEMBER 4, 1897.

NO. 8.

TIME THE ONLY ARBITER.

BY J. A. CHAPPLE, D.D.S.,
Atlanta, Ga.

In an effort to establish himself in a new community no professional man labors under the disadvantages experienced by the dentist. For the proof?

A lawyer launches his sign in a new town. His merits are unknown, but he is employed in a case, or, as is often the practice of a novice, tenders his services to the client, gratis—a procedure that is regarded as entirely ethical. In spite of the law and the evidence, relying—wholly upon Aaron Burr's definition of law, *i. e.* "that which is forcibly asserted and plausibly maintained," he secures a verdict for his client. Perhaps hundreds hung upon his eloquence. He therefore had hundreds to proclaim him a good lawyer, and at one bound he leaps to the front.

The new doctor, in the absence of the regular family physician, is called to attend a patient who is well and favorably known throughout the community. Daily inquiries are made regarding the patient's condition. He is, invariably, "a very sick man," but in defiance of a faulty diagnosis and the wrong medicine administered, the desperately ill fellow pulls through, and it becomes the consensus of opinion for miles around that the new doctor is quite skilled in his art.

A minister fills his pulpit for the first time. A large and intelligent congregation eagerly awaits to hear his initial effort.

His manner and personal appearance are in his favor, his voice is pleasing to the ear, and he delivers a sermon greatly appreciated by all present. His reputation as a "pulpit orator" is established at once.

The artist paints the portrait of a "leading citizen" or "acknowledged belle," and should it prove a living, breathing thing on canvas, orders pour in upon him unsolicited, and with, not only a reputation made in a day, but as a substantial accompaniment, ducats as well.

The surgeon removes an ovarian tumor or an appendix, or restores the blind to sight—all with marked success—and his claims to proficiency are at once conceded.

But no such opportunities present themselves to the equally competent and meritorious dentist. His first effort may be the highest expression of manipulative skill, but no one is conscious of the fact but himself: none to herald his achievements, and none to applaud but an approving conscience.

In many instances where the dentist has discharged his services to the greatest satisfaction of the patient he is enjoined to secrecy. This was the experience of the writer in the first years of his practice. A beautiful and accomplished young lady, in her teens, by reason of extensive pyorrheal condition, was forced to lose the four lower incisors. These were first duplicated in every respect by artificial teeth. Sabbath morning, when the family, with two exceptions, were at church and the servants discharged for the day, we removed the teeth,

took the impression and bite, and late in the afternoon inserted the denture, a perfect *fac simile* in shape, size, color and *irregular* position of the original. We were indeed proud of our success. The patient was equally so. But perpetual secrecy was exacted, and our only remuneration was a generous fee and the confidence and patronage of an influential family. This bit of experience is doubtless but an echo from thousands of others, and there is no need to multiply examples.

Except in a few isolated instances where a lucrative practice is at once enjoyed by reason of large family connections or most favorable environment, on an average it requires at least ten years of hard work before the dentist gains the unreserved confidence of the people. It is then, perhaps, when his sight begins to fail, or some physical infirmity asserts itself, thereby greatly disqualifying him for the proper discharge of an increasing practice.

How best to correct this grievous disparagement, and place the dental surgeon in an equally advantageous position we leave to the political economist.

Is Baldness Contagious?

Dr. Sabouraud, in the *Annales de Dermatologie*, firmly believes that the disease is contagious, and that barbers' instruments are most common carriers of the contagion; but as customers come and go from one barber shop to another, it is difficult to trace each case to its source. Starting with the theory of the microbic origin of the disease, Sabouraud has worked out a strong chain of evidence in its support.

The Time is at Hand.

Many enthusiastic expressions about the AMERICAN DENTAL WEEKLY, and subscriptions as well, are coming in. You may not see another copy in a long while unless you send \$1 for six months or \$2 for twelve months. You want the news once a week and fifty-two times a year.

INSTRUCTIONS FOR USING COCAINE.

BY NORMAN J. ROBERTS, D.D.S.,
Waukegan, Ill.

Success with the cocaine solutions depends upon three conditions:

First—Absolutely pure water.

Second—Fine, sharp needles.

Third—Thorough injecting.

With these conditions complied with, absolutely painless operations can be performed without any systemic or local disturbance.

Dentists should prepare their own solutions. In warm weather it should be done twice each week, while in cold or mild weather it should be done once a week, although it will last much longer.

The necessary apparatus consists of a good filter or distilling outfit, a set of prescription scales and a bottle of cocaine crystals. To inject successfully, it requires sharp Number 28 gauge needles (straight and curved) and a strong syringe provided with large finger bars.

Every precaution should be taken to prevent the cocaine solution from coming in contact with the tongue and throat. When a napkin or absorbent paper cannot be placed close to the point of the syringe to absorb the escaping fluid, a rubber bulb infant's syringe should be filled with water and be in readiness to wash the escaped fluid away immediately.

FORMULA.

Cocaine hydrochlorate	28 grains.
Carbolic acid	5 drops.
Filtered and boiled (or distilled)	
water	8 ounces.

Have the point of the needle very sharp, and inject as near the middle of the tissue as possible, between the process and the outside of the mucous membrane.

After repeated experiments during the last four years, I have come to the conclusion that the efficacy of atropine, chloral,

boric acid and kindred drugs added to the cocaine solution only tend to cause irritation and sloughing, adding no particular virtue to the formula.

The operator should provide himself with one of Dr. Fitch's pocket prescription scales, costing \$1.00, which is sufficiently accurate to weigh 15 grains at one time. Then if a good filter (Pasteur preferred) is used to purify the water, and it is boiled for half an hour or distilled, then placed in an air-tight bottle sealed, it can be used with perfect safety.

PRECAUTIONS.

In very warm or cold weather, and with weak nervous subjects, a test should be made by carefully injecting around one tooth first. Then if no serious symptoms are manifested the work can be continued with little liability of further trouble.

A stimulant is always in order where weak or nervous patients are operated on, and brandy is about the best, taken several minutes before operating.

Nitrite of amyl, ammonia and camphor inhalations, as in all disturbances from an anesthetic, are indicated, should symptoms appear.

Never fail to have the patient rinse the mouth thoroughly and often during the operation, and at the last moment swallow some water to remove the cocaine from the throat, which will prevent nausea.

Until you are expert in the use of the needle, do not try to inject over three or four teeth at one time, but allow several minutes to elapse before commencing again, for trouble will come from allowing the solution to escape in the mouth or from injecting into soft vascular tissue where rapid absorption takes place. With clean instruments, sharp fine needles, pure fresh solutions, and careful manipulation, success is assured.

CARE OF THE SYRINGE.

When not in use always keep a wire in the needle, a cap on the end of the syringe, and have water in the barrel.

Provide yourself with extra wires, so that in case the wire bends you will have a straight one to place in the needle.

Should the syringe not have good suction remove the top, withdraw the piston, place some fine sweet-oil between the washers and tighten them by the nut on the piston. Half your success will depend on the proper working of the syringe.

AFTER TREATMENT.

Whenever the tissues in the mouth are wounded, whether by extraction or other means, an antiseptic mouth-wash should always be prescribed. The following formula and directions, put in the form of a rubber stamp, is a very convenient means of furnishing a prescription to the patient without taking the dentists' time.

Boro glycerine..... 3 ounces.
Carbolic acid..... 3 drachms.

Mix about half a spoonful of the wash with half glass of water (warm preferred); brush teeth and rinse gums thoroughly, holding wash in mouth three minutes. The printed directions should be placed on the bottle, so that the patient can more easily comprehend the instructions.

TO PREVENT SLOUGHING.

Your needle and syringe should be scrupulously clean, and do not use the same needle in pus cavities that is used to inject the gums. Immediately after using the needle wipe it dry. Keep an extra bottle for the remaining contents of the syringe after use, as none of the drug should be poured back into the original bottle.

Whenever specks are seen floating in the solution, filter through filter-paper.

Inject a good article of peroxide of hydrogen into the sockets of ulcerated teeth. All pieces of loose bone should be removed, and also any part of the solid bone which might irritate the gums.

FINAL PRECAUTIONS.

Have your needle sharp and clean. Always give your patient time to rinse his mouth thoroughly. Be very sparing in the

use of cocaine solutions in very warm or very cold weather, and also with weak and nervous patients. Take plenty of time and have the air in the room cool.

A few drops of cocaine on the tongue or throat in a warm room will make almost any patient faint and sick. Always have your stimulants and restoratives close at hand, that no time may be lost hunting for them.

TO BACK A TOOTH TO PREVENT CRACKING.

BY H. H. JOHNSON.

Take a piece of twenty-four carat gold about thirty-six gauge, fit carefully to the tooth, and see that the pin holes be not too large. Extend the backing over the cutting edge a little, at right angles, but do not lap it down on the labial side. Remove carefully, and flow twenty-two carat solder over the backing from the pin holes to the cutting edge as thick as it must be when the piece is finished. This done, clean the tooth with alcohol of all wax, and the backing with sulphuric acid of all borax and oxide. Next mix thin cement and spread over the backing and place on the tooth. Press down until all the surplus exudes. Bend the pins slightly to prevent the backing getting moved. Invest and bring the investment well down over the cutting edge of the tooth and backing, as this part has already been strengthened with solder. A tooth backed in this way will not crack from borax or solder getting under the backing.

Go Abroad to Get the News.

One of our esteemed German contemporaries (*Die Zahntechnische Reform Woonenschrift*) says the State of Massachusetts is about to pass a law to prevent the use of amalgam as a filling material, and the use of rubber for artificial dentures, on account of the mercury they contain. F. A. B.

IS THE ETHICAL MAN ETHICAL?

The strictly ethical man, though barred from advertising in a commercial sense, is, nevertheless, an industrious and discriminating advertiser. His methods and keen foresight into the best channels for an advertisement would command a premium in "the marts of trade." To one who is fond of the humorous side of life, the various means employed to attract public attention to one's professional wares, remind him forcibly of a "Comedy of Errors." His special accomplishment or natural endowment, aside from his professional trend, will generally determine the particular channel or method by which he hopes to attain his end.

We note a few striking examples, not for your information, because they are familiar old friends of yours, and you will readily recognize them; but in the past they have afforded us much genuine pleasure and profit, and for that reason only we wish to accord them that public recognition they so richly deserve.

The time-worn trick of being called from a church congregation or crowded theater to attend a patient has served its day, and is now seldom, if ever, resorted to. (On one occasion at a church in a Western town, in the midst of a sermon, the minister paused to announce that "if Dr. Blank was present, he would please answer an urgent call at the door." Dr. Blank was present and happened to occupy an adjoining seat by the writer. He was a young M.D. of acknowledged ability and engaging personality, and enjoyed a good practice. But his sense of honor and fear of ridicule should he respond to the call impelled him to keep his seat—a circumstance which injured greatly to his material interests shortly thereafter, by reason of the fact that his presence was quite generally known by those present, and his failing to answer the summons at once dispelled the suspicion—

if any existed—that he was the author of the “call.”)

A few years ago the popular method of advertising one's self was in the form of an *interview* with a reporter of some paper, in which the personal pronoun figured most conspicuously. But the purpose of this became so flagrant to the public it, too, has been abandoned, and methods more subtle and least suspecting are now employed to “win favor and affection,” if not a few dollars.

Perhaps the most inviting field just now for self-promotion, and one more eagerly sought than any other, is an active membership in secret organizations. The young (and old) aspirant for professional preferment can be relied upon as a *regular* attendant at all the stated meetings; and should he be asked to serve in an official capacity, with blushes and apologies, but secret elation, he accepts the high trust imposed with a speech largely interspersed with 4th-of-July patriotism and the personal pronoun. To see his name in the list of “officers elected” as it appears in the *public prints* is the culmination of an ambition long nourished by our ethical confrère.

But should our wide-awake friend entertain some “peculiar views” about secret orders, and declare himself as acting upon the golden rule, he is likely to be seen occupying a conspicuous seat in some fashionable church; usually comes in after the preliminary service, when the pews are full, and to get a seat at all, is reluctantly pressed forward to one in the “amen corner.” Seemingly he drinks in every utterance of the preacher; but the while he is absorbed in a mental calculation as to how he can be appointed or elected to a stewardship, for it is in this capacity that he could be seen and advertised to the greatest advantage. No opportunity escapes him. He sympathizes with the usher on extra occasions, and relieves him, voluntarily, of his arduous task; or, should the choir lack one more

voice, while making no pretensions as a singer, yet as an accommodation, he will cheerfully assist them in their dilemma. For versatility of talent and varied accomplishments, this variety of conscienceless bidders for patronage, stands unrivaled; and the returns, as a rule, are proportionately compensating. The unsuspecting note the activity and spirituality of the newcomer in church affairs, and reasoning from analogy, vote him as *au fait* in his specialty. With such a verdict it is not difficult to forecast the result.

There is another class who prefer to ignore secret orders and the church as mediums for advertising, giving a preference to the leading hotels in the town. While the length of their purse will only allow them to live at the hotel for a brief period, yet in this time they will have sufficiently ingratiated themselves into the good-will of the proprietor who can be relied upon to send him the transient custom.

All the avenues enumerated being occupied, or his judgment dictating otherwise, the ethical man not infrequently aspires to the rôle of politician—not that he desires an office, but rather prefers to be known as a “hard worker” for the winning candidate, whose election was largely due to his political acumen and influence.

But should our friend happen to be endowed as was Apollo Belvedere, and care not for secret orders, the church or politics, you may look for him in the most conspicuous seat in an opera box during special attractions, or posing before some popular club-house (of which he is not a member) picking his teeth or smoking a cigar.

A method peculiar to others differs radically from those already noted. It is in the deep and mysterious recesses of his office where he pours into his patrons' ears the astounding information that he is the only one in his profession who imports from abroad certain preparations and who successfully treats and cures specified diseases by means peculiarly his own.

These are characters so well known to all, they need no introduction or further elaboration. They have existed from time immemorial, and will continue to abide with and among us till death claims them for his own.

The natural inquiry arises, but does all this form of advertising pay? We have been a close observer of men and methods, but fail to recall a single instance where such have been able to sustain themselves for any considerable period.

The man of conscious ability will rarely "stoop to conquer" or "bend the servile knee" for the plaudits of a class who are unable to discriminate between the "good, bad or indifferent."

Hence, the class who bid for public favor by questionable methods, aware of their own incompetency, seek to compensate themselves early while victims may be found, knowing full well that a day of reckoning, fraught with most fatal consequences, will mark their end!

It is not to be inferred from the foregoing that all professional men who are active in the particular spheres in which they may elect to take a part, are to be classed as ethical advertisers. Impelled from education, training or natural choice, they seek an atmosphere entirely congenial to their natures, and where self-aggrandizement never enters into their calculations.

As to whether the ethical man is ethical, we believe has been shown in the negative.

ETHICS.

Wax to Retain Crowns and Bridges.

W. Dunn, D.D.S., Florence, Italy, says, white wax with a little rosin is excellent to flow (by means of a hot burnisher) over a freshly set crown or bridge and the adjoining teeth; it will retain the work in place whilst the cement is setting, will not look unsightly like chloropercha, and will work off easily in eating.

A CASE IN BRIDGE WORK.

BY T. F. DRISKILL, D.D.S.,
Corsicana, Tex.

The patient had a bridge put on by an excellent operator some three years ago. He had used the lower third molar and the first bicuspid as abutments. Recently she called to have me remove the bridge, as the bicuspid had broken off owing to the constant friction of the band which had been used, instead of a shell crown. The bridge had become an irritant and a worthless encumbrance.

I removed the bridge. Put the root in order. Made a solid gold crown with a heavy platinum pin, first fitting the pin in the root and a tiny gold band around the stump just under the free margin of the gum. I united the band and pin by a cap, which served as a base for my crown. This finished and articulated, I removed the band from the bridge and adjusted it to suit the new crown.

Articulating the two pieces in the mouth, just as they should be, I removed them intact by means of a suitable bridge tray and plaster. After properly investing I soldered the two parts together. The piece finished, I replaced it in position, a much stronger and more serviceable substitute than it was when first made.

Moral.—Better show a good deal of gold than to give your patient work that cannot stand. Bands, however firm at first, will prove an irritant, and useless in the end.

To Prevent Mouth Mirrors Frosting.

The following suggestion, adopted from a medical journal, has proved valuable: Before using the mouth mirror, rub *dry* soap all over the glass, and polish with a dry cloth. Moisture will not dim the glass until this imperceptible film wears off.

A. T. PEETE, D.D.S.

NOTES ON CATAPHORESIS.

BY HENRY D. GILLET, D.M.D.,
Newport, R. I.

Editor American Dental Weekly:

I am impelled to send you a few notes apropos of some of Dr. Hinman's statements, in his article on cataphoresis in the issue of September 30th, which seem to me (after three years' experience) to be misleading to those beginning, or contemplating the use of the process.

Dr. Hinman makes the sweeping statement that in teeth previously filled with amalgam or cement, the process is entirely inapplicable. No such statement can be justified by the facts. I am constantly inducing complete anesthesia in the dentin of such teeth.

On the day I read his article, I scored a perfect success in two bicuspid cavities in which I found a layer of cement covering the whole cavity except the enamel walls (a thin layer of gold over it), and which the patient assured me had been there twelve years.

Even cauterization with silver nitrate does not prove an insurmountable barrier against cataphoric anesthesia, as was demonstrated at Baltimore in March, 1896, where, at a clinic, I induced anesthesia in a cavity which had been repeatedly treated by previous operators with silver nitrate.

Such cases take longer, but sometimes they best repay the effort, since they most often need the treatment.

I would agree with Dr. Hinman to this extent—that *some* cavities, previously filled with *any* material, offer great resistance to the process, and occasionally such great resistance as to make it inapplicable to them. Those cases showing evidence of deposits of secondary dentin, either in or around the pulp, seem to the writer to present the most difficult conditions to overcome.

The difficulties of insulating approximal cavities with fillings next them in adjoining

teeth, are so easily overcome that it seems needless at this late day to even mention such cases as among the difficult ones. A study of the literature on the subject will reveal many suggestions for such cases.

The statement that the clamp or separator will entirely divert the current is difficult to understand. Only when these are in contact with the gum or with metal fillings, can it make any possible difference whether the current reaches them or not. When resting on the enamel, or even dry dentin, they can have no possible influence on the course of the current. Their insulation is simple enough to the ingenious operator.

The satisfactory use of street circuits as a source of supply by some of the most reliable practitioners of New York and Boston, would seem to call for some modification of the statement that such currents are not applicable for cataphoresis. Some systems are too poorly equipped and managed to be of service, but by no means all.

Absolute safety is assured with a battery, but equally satisfactory service as regards results is obtainable from well-equipped street circuits.

The statement that the simplest instrument is the best for cataphoresis seems to need amplification. Some that I have seen are much too simple. The two best that I have yet examined were the two most complicated.

With Dr. Hinman's closing paragraph I agree most heartily. The ideal instrument has certainly not appeared yet, but I see indications of its coming, and the net result of the painstaking work so many men are doing must bring improvements every month.

Bealing.

A patient from East Tennessee said her tooth had been "bealing" for quite a while. Will Dr. Richards, of Knoxville, define this term?

Teteleka and His Teeth.

Mr. Clayton Woodhouse, in the current issue of the *British Journal of Dental Science*, relates an unique experience while on a recent visit to South Africa. He says:

The populace in the colonies generally has much to learn in the patience requisite for obtaining satisfactory results from prophylactic dental surgery, and of course the practice is almost entirely amongst the white population. One exception to this that came under his notice we should like to mention. When at Maritzburg he made a short excursion up in the hills to visit Teteleka, a Kaffir chief, who, with his fifteen wives, lives in true native fashion on his demesne of some thirty miles square. His morning costume at the time of his visit, as was shown by photograph which he took of him, consisted simply of his girdle or mutjki, made of foxskin. When chatting to him through an interpreter in the dim light of his kraal he noticed the absence of an upper central and lateral incisor in his otherwise splendid denture. Drawing his attention to this defect, "Man's fist," was the explanation, and at the same time he dived his hand into the roof of his hut and brought out, to his surprise, a couple of artificial teeth neatly mounted on a plate which he deftly inserted into position. This, to his mind, presented a curious link and contrast between savage life and a too frequent concomitant of civilization. He subsequently found, in talking to one of the leading dental practitioners of Maritzburg, that the teeth had been made by him. When the chief visited him he was usually accompanied by several of his young braves, each one of whom insisted on losing a sound tooth by way of being on a par with his chief. My dental friend was constrained to waive his conservative tendencies rather than find the integrity of his window-panes and furniture impaired by the sable retinue.

The operations were, he was assured, borne with stoical indifference and the results carried away in triumph.

J. A. C.

Imitation of Granular Gum.

To produce a natural-looking effect with rubber, Dr. Randall, in the *Dominion Dental Journal*, gives the following process:

When using plain teeth and pink rubber, instead of finishing gum with file and sandpaper, use with the dental engine a large round bur (rather dull); a smaller bur in the corners between the teeth. With the rapidly revolving bur carve the gum festoons, moving first vertically and then longitudinally; as the carving process nears completion pass the bur lightly over the surface, then polish with brush wheels, pumice and whiting. This gives that granular appearance peculiar to the natural gum and not a perfectly smooth surface.

Dental Wax.

The following formula is taken from the *Dental Review*:

French chalk :	14 parts.
Gum kauri.....	8 parts.
Stearine.....	4 parts.

Melt the stearine over a water bath, add the finely powdered gum kauri in small quantities. When desolved sift in slowly the chalk, and stir constantly till cold. Color with carmine, if desired.

An Abomination.

Of all the abominable things that have been offered as a root-filling, salol is the worst. If there is a doubt about this in the reader's mind, and if he has used it, let him remove the filling from over any root so filled. He will find the canals as free from filling as if nothing had been put into them. As an antiseptic root-filling material, it is a snare.

Dr. J. R. Woodly of Norfolk, Va., after a long illness, died a few days since. A more extended notice will appear later.

There is a town in New Jersey without a physician. Wonder if it is without a dentist?

THE
American Dental Weekly
 ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription \$2.00 per year; \$1.00 for six months—Including Canada and Mexico; other countries \$3.00 per year.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, November 4, 1897.

Society Meetings.

An editorial in that live weekly, the *Maryland Medical Journal*, hits the society nail so squarely on the head that we reproduce below the article. The only thing necessary for our readers to do, is to change it to mean dental instead of medical societies:

"One thing that would add greatly to the attendance of most societies would be prompt opening and early closing. The minutes should be read at the hour announced, and the papers should be begun and cut off when the time limit has been reached. The discussions also should be curtailed to the proper length, and then the whole meeting will have that snap and go about it that makes such spirited gatherings full of interest.

It is the long didactic papers that frighten away members and make the ordinary session a thing to be dreaded. As a member suggested at the first meeting of the Clinical Society, more clinical material would

be interesting and instructive and the simple relation of a case with the illustration would do more to make the evening attractive than all the papers combined. Now and then a special paper adds greatly to the work, and the plan adopted in some cities of having a physician or surgeon of reputation come from some other city and give in person the views which he has so often advocated in print, and meet the members, is as a bright spot in the often dull meetings."

Danger in Tranquillity.

There is much for solid thought in the article by Dr. Beadles, in last week's issue. While some may consider the question well worn, yet it is one that demands constant attention. "Higher, higher should we climb," a quotation from the old-time schoolboy's speech, needs reiteration in this day and generation.

Much has been done, and is being done, and much yet remains to be done before the watchman on the tower can be called down. Often the greatest danger lurks around, when all seems tranquil and safe. Each succeeding generation must put forth and carry out reforms. The higher we climb the more difficult the climbing becomes, and more watchfulness is necessary to prevent a downfall.

Death in a Dental Chair.

A rather remarkable case of death in a dental chair is reported in the *Dominion Dental Journal*. To a woman chloroform was administered for the purpose of extracting teeth, but before operating, dangerous symptoms occurred. Soon death came. A *post-mortem* examination revealed the fact that an aneurism, not previously known to exist, had bursted, filling one lung full of blood. A physician administered the chloroform. The result of the autopsy saved both dentist and physician of severe censure.

The Dental and the General Surgeon.

The following extract from an address by Dr. C. N. Johnson, before a graduating class in dentistry, is too good to be lost :

To be an expert dentist demands a rare combination of good qualities. A dentist is called upon to accomplish more in a way than any other man. The general surgeon is often pointed out as an individual whose attainments entitle him to the homage of mankind, and in truth he deserves all the praise he gets. But did it ever occur to you how much further the dentist goes in his service than the surgeon? The latter simply removes diseased parts, and depends on nature to heal the breach. If he finds a tumor, a sloughing appendix or a bit of necrosed bone, he takes away the diseased tissue and nature repairs the loss. Nature is exceedingly kind to the surgeon, and is his main ally, no matter how expert he may be individually. Not so with the dentist. When a decayed tooth presents itself he proceeds to remove the carious tissue along the same lines that are employed by the surgeon, but he must go a step further. Nature will do nothing to aid him in repairing the loss. A bit of enamel once gone is gone forever. A cavity in a tooth will never fill up by natural processes. It remains then for the dentist, by virtue of his high mechanical attainment, his knowledge of anatomical forms and his artistic perceptions to make good the loss. For this purpose he goes out into the field of nature and presses into service that royal metal which is the insignia of all that is pure and precious among its kind. With this he reconstructs the maimed and broken member, giving it new form and utility, and creating a thing of beauty where before there had been nothing but a blemish.

The office of the WEEKLY had a delightful call from Dr. A. C. Quillian, of Athens, Ga.

Give Us the Remedies.

"I am fully persuaded that more than 50 per cent. of dental caries is absolutely preventable by medicines internally administered which act specifically in the mouth." This is a bold declaration of Dr. G. H. Winkler, in the *New York Medical Journal* for July. It is the concluding paragraph of an article entitled, Medicinal Prevention of Dental Decay. The doctor is entertaining throughout his elaborate dissertation, but we were greatly disappointed when he neglected to give us at least a partial list of constitutional prophylactics.

In this very pessimistic age mere opinions, unsupported by tangible evidence, are largely discredited, and the authors of such opinions are usually classed with the Rudyard Kipling school of philosophy. We earnestly trust the clever doctor will give us something a little more specific.

Dental Hemorrhage.

The following treatment for this sometimes serious trouble, by Dr. Langiele, in *Dominion Dental Journal*, may be useful. He says: Mix ordinary dental plaster quite stiff and with a tightly rolled ball of absorbent cotton, press the plaster, one piece after another, into the alveoli until the bleeding stops. If worked skilfully it acts like magic, and a fair trial will convince the most skeptical. He has employed this method for the last ten years, in which time he has had a number of very severe cases, but has controlled the worst in from five to ten minutes time. The plaster requires no further attention, which is a great advantage over a plug of cotton or other material. As the wound heals it is thrown off without having caused the least irritation.

Dr. D. R. Jennings, of Cleveland, O., attempted suicide a few days since, by shooting himself, and will probably die. He was addicted to the use of cocaine.

Diagnostic Signs In Diseases of Children.

The following are given as points diagnostic in diseases of children by J. Lewis Smith (*Med. Council*):

Lividity of the skin, induced by exertion or excitement while the respiration is normal, indicates malformation or disease of the heart or vessels.

Transient circumscribed congestion of the face, ears or forehead is a most reliable sign of brain disease.

Absence of tears in infants over four months of age, during the act of crying, indicates a severe and probably fatal form of disease.

A permanent downward direction of the axis of the eyes, with smallness of the face and great expansion of the cranium, is a sign of congenital hydrocephalus.

Young children do not shake when they have chills, but have a pallor or lividity of the skin, lips and nails.

Bulbous enlargements of the fingers and incurvation of the nails are signs of cyanosis and therefore of malformation at the center of the circulatory apparatus, or of tuberculosis, or of chronic pulmonary diseases attended by malnutrition.

Enlargement of the spongy portion of the bones causing prominence, softness and bending of the bones, an open condition of the fontanelles, a large, square-shaped head, and delayed dentition indicate rachitis.

A thick, meibomian secretion of puriform appearance, collecting between the eyelids, an unfavorable prognostic sign, indicates a state of great depression. It is observed more frequently in cerebral and intestinal diseases shortly before death.

Dr. Harlan, the able editor of that splendid monthly, the *Dental Review*, says the AMERICAN DENTAL WEEKLY is very attractive. Such words from such a source are appreciated.

Some Little Useful Things.

The following, written by "A Lazy Man," we take from the *Dominion Dental Journal*. Let several of our readers send in other items, and make the exchange mutual:

If you add two per cent of silica to gold plate to be melted, you can accomplish it over the flame of a common candle.

Apply powdered or lump resin to the driving belt of your engine, to prevent it slipping.

If you remove gum blocks from the flask and rub the joints very lightly over fine sandpaper before replacing them, they can be packed much cleaner. Where there is any vestige of wax there will be unclean joints.

Wash your amalgam with a few drops of sulphuric acid added to water.

For sterilizing instruments, boil them for five minutes in a one per cent. solution of carbonate of soda. It will preserve them from oxidation, as well as make them aseptic.

Do not use spunk for drying cavities unless you are sure it leaves no *débris* behind. It is handy on the tweezers as a conveyer for large amalgam filling in posterior cavities. Very useful, too, to smooth off ends of fillings.

Oxyphosphate is the best thing with which to repair broken teeth of plaster models, if you can wait an hour till it sets. Cut strips of the various grades of sandpaper, use with the split mandrel of your lathe. Fit them in tight. Slip them off. Glue them, lay aside for use. Also cut down corks to cones, glue on pumice or corundum stone. A very coarse English corundum stone makes one of the best coarse polishers.

Keep your corundum wheel out of the hot sun.

Dr. C. H. Land, of Detroit, once told me that he found heavy pasteboard makes a capital vulcanizer packing, and that where

vulcanizers leak, dusting on corn-starch will stop it.

When you use alcohol to cut or sharpen a corundum wheel, do not attempt to use it until it is absolutely dry.

To keep your solder in place, add a little gum arabic to your flux, and rub with the borax and water on the slate.

To make sticky wax for holding clasps in place, use resin two parts, beeswax one.

The Use of Sugar After Severe Muscular Exercise.

Experiments of an interesting nature (*Medical Record*) have lately been made at the instigation of the Prussian war office, to endeavor to decide the question as to whether the consumption of small quantities of sugar renders the tired muscles capable of renewed exertion. In order to obtain a practical result, the person who was made the subject of the experiment was kept totally ignorant of the object of the experimenters. On one day a sweet liquid was administered, containing thirty grams of sugar; on the next day a similar liquid, containing a sufficient amount of saccharin to render it indistinguishable from the other as regarded taste. After a very large amount of muscular work had been performed, it was found that better results could be obtained on the days when the sugar was given than on the days when saccharin was given. The blood had become very poor in sugar in consequence of the severe muscular effort, and the administration of a comparatively small quantity of sugar had a markedly invigorating effect.

WANTED.—Thoroughly capable assistant for Paris, France. Must be willing to prepare for and pass, as rapidly as possible, the government examinations, during which time he would not more than pay expenses. There is an excellent field in France for one who is willing to take the trouble to obtain the license to practice. Address **AMERICAN DENTAL WEEKLY.**

How to Use the Surplus Amalgam Left From a Filling.

As a rule, we mix considerably more amalgam than is needed for each filling that we make. This surplus may be used to great advantage in taking up the superabundance of mercury in the filling. After the cavity is well filled and packed, by gently working the surface of the filling with a large pointed instrument, or bur-nisher, the mercury comes to the surface. To this soft portion of the filling add the remaining amalgam, and work the surface as before. Now scrape off the surplus and you will find the filling firm, and the amount of amalgam scraped well charged with the surplus mercury. This may be repeated as often as necessary.

H. R. J.

Vulcanizer Packing.

The steam packing in vulcanizers is a fruitful source of trouble. Since adopting thick wrapping-paper, my trouble has ended. I have a ring cut out of common tin, exactly corresponding with the top rim of the boiler. With this pattern a dozen rings of wrapping-paper are made in a few minutes. One of these soaked in water is placed in the cover over the old rubber packing and brushed over with stove-polish. It makes a perfect joint. The last piece is taken out before adding a new one. A single piece of paper often lasts for weeks.

A. T. PEETE, D.D.S.

High Low, Mostly Low.

In answer to a beginner's question as to what he should charge for Logan, Richmond, and gold crowns, writers in the *Dental Brief* play a good high low game, principally low, however; \$4.00 to \$15.00 is the range.

If the question is a real one, we would like to say to the asker, that he who puts a gold crown on a front tooth should receive the pay of a sentence to the penitentiary, provided he is proven sane.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., NOVEMBER 11, 1897.

NO. 9.

COMBINATION FILLINGS AND COHESIVE TIN.

BY B. F. ARRINGTON, D.D.S.,
Goldsboro, N. C.

The old idea, and prevalent opinion at one period, of packing all gold into cavities, from base to finish, as the best means and most scientific practice for the preservation of teeth, is rapidly vanishing, and will soon be thought of or mentioned only as an absurdity of the past in dentistry. But few men in the profession at this date, only the impractical and one-idea men, presume to contend for all gold in filling teeth; the principles of conservatism and practical common sense forbid. The spirit of true conservatism (as truth) must and will prevail and rule, and upon that basis teeth must be treated and preserved.

Many cavities can be as easily and well filled with gold, and the teeth will be as perfectly preserved in comfort and for utility, as with any other material, and under some circumstances gold is most desirable and should be given preference. But with a large percentage of cavities gold and tin combined is better practice. Tin for base and gold for finish. Teeth will be better preserved, and there will always be a greater guarantee of comfort and satisfaction to patients. Trouble from thermal changes will but rarely if ever occur.

For many years it has been my practice to combine metals (gold and tin) in filling deep cavities, and have realized better

results than could have been hoped for had I used gold exclusively.

Thirty-three years ago Dr. Wait, of Richmond, Va. (long since passed away, truly a good man in the profession, a conservator from foundation to finish, on every line and feature of practice), advised me to combine gold and tin-foil and use in rope form for filling. I accepted his advice and instructions, and for several years practiced accordingly, and was satisfied and thoroughly convinced that the combination was superior to all gold for many cavities. I concluded to experiment on that line, and changed the mode of combination with strengthened evidence and increased faith in the virtues of combination of metals, and now for more than a quarter of a century have used tin for base and gold for finish, and am better pleased with the results.

I first used tin-foil, rope or pellet form, to fill cavities half or two-thirds full, then finished with gold, soft or cohesive as indicated, and selected for respective cavities cylinders, rope or pellet as judgment directed, always considering locality of cavity, character of walls, etc.

For twelve or fifteen years past I have given preference to a preparation of tin known as *cohesive tin*. It is a fiber or moss-like mass, put up in rope form, in half-ounce boxes. It works easily, and is in every respect more satisfactory than tin foil. For buccal and approximal cavities in molars and bicuspids, it is preferable to gold or tin-foil, singly or combined, and as a filling for temporary teeth it has no equal.

Then rightly manipulated it can be made the most perfect water-tight filling of any single or combination of metals in use.

I do not recollect that I have ever had a patient to complain of discomfort from the effect of a combination filling, or one made entirely of cohesive tin.

Tin, we all know, is more soothing and less antagonistic to dentine than any other metal, and is much less conducting in property than gold or amalgam.

At this advanced stage of dentistry, developed and developing grandly on every line, there can be no excuse for filling deep cavities with gold exclusively, and the man who does it is not truly a conservator in practice, and fails to do justice to his patrons, and unquestionably is not abreast with the progress of the profession.

The true science of dentistry does not consist in successful manipulation of gold or artistic display of the metal in the dental arch, but in effort and ability to preserve in comfort and natural appearance the teeth as best we can, and upon a basis that will admit of the greatest number of sufferers enjoying the privilege and benefits of our services. With such a foundation basis of theory and practical conservative action in practice, we can and may hope to do much for those in need of our services, and we will advance rather than retard the rising standard of our profession.

The Brain and Remote Parts of the Body.

The *Health Magazine* says, another instance showing the intimacy between the functions of the brain and the remotest parts of the body is observed by those who have to do with the inmates of asylums. It is that which concerns the thumb and the brain. It is said there is one infallible sign of insanity. Let a person speak ever so rationally and act ever so sanely, if his or her thumbs remain inactive there is no doubt of insanity. Lunatics seldom make use of their thumbs when writing, drawing or saluting.

NITRATE OF SILVER A VALUABLE REMEDY IN CASES OF PATHOLOGICAL FIRST DENTITION.

It cannot be denied, says one of our French brothers in *l'Odontologie*, that as tender a being as the child in the first years of his life is influenced quickly by any disturbing change. Especially do we have many examples that every sickly child feels the coming of his teeth more painfully if the dentition is abnormal. Yet there may appear symptoms which are independent of any sickly disposition, but influenced by the dentition and which must be taken into consideration with the same care and attention.

The inflamed condition of the mucous membrane of the mouth is frequently accompanied by secondary symptoms; the swelling caused by the moving tooth is painful, the tissues are expanded and hyperemic. Of course the general state of health is changed by this local evil, temperature rises, followed by disturbed digestion, diarrhea, sleeplessness and nervous excitement, a condition which weakens the child and frightens the parents.

Is it not therefore absolutely necessary to have the means on hand to remove the cause and stop these disturbing appearances readily?

The action of the tincture of iodine, used by many, is not sufficiently quick nor deep enough! An ideal remedy is such, with marked astringent and antiseptic properties, one which would bring on a change of the structure of the cells and so cause relaxation of the painfully expanded tissue and remove the resistance which that tissue has put in the way of the outcoming tooth.

All those properties combined have been found by the essayist in the nitrate of silver, with which he has had excellent results. Its application is quick, simple and not dangerous in the least. A fresh solution is prepared by him for every application by taking a pellet of cotton saturated with water

and rubbing same on the salt. The cotton is soft and can be applied without increase of pain to the child, while it touches a large surface at once. This treatment is repeated three or four times the first day; an improvement can be noticed on the second day in most cases, and it rests entirely with the good sense of the practitioner when to limit the applications. Places which are especially red and inflamed can be touched with the nitrate of silver stick.

The well-known fact of the painful disturbances which the incoming third molars, especially in the lower jaw, often cause, should induce the practitioner to use the nitrate in those cases also, instead of using the bistoury. The writer applies same on a pellet of cotton below the layer of gum which usually caps the molar. One or two applications would be sufficient the first day, while after a few days the patient will feel entirely relieved.

F. A. B.

The Increase of Diabetes Mellitus.

Dr. H. A. Hare says, in the *Medical News*, that the gravity of this affection is in direct proportion to the youth of the patient, and that after fifty years of age, and particularly in stout people, its gravity is greatly modified; also that the male sex is much more frequently affected than the female. The disease is much more prevalent in England and America than it was a few years ago.

Keep Hypodermic Needles Aseptic.

In hypodermic injections nothing is more important than to have the needle aseptic. An easy way to clean it of micro-organisms is to put the needle in an iron spoon filled with water and hold it over a spirit lamp or other flame until the water boils. Do this after each case. Very little time is required.

D. D. A.

PYORRHEA ALVEOLARIS.

This is one of the old thread-bare subjects, but a paper by Dr. A. W. Harlan, read before the Chicago Dental Society, brings out some interesting claims both in the paper and in the discussion which followed its reading. An abstract from the paper contains the following causes of the disease:

According to our observations, extending now over many years, and having covered a large number of cases—hundreds of cases of true pyorrhea alveolaris—we have come to this conclusion, that the etiology of pyorrhea alveolaris, while it may be more or less obscure, has a more reasonable basis for its understanding when the contention is made that it is of hereditary, local, or infectious origin, and that there must have been an injury antecedent to the beginning of the destructive agencies which we always find present around the roots of teeth. It may be, in some instances, that this is due to the use of drugs; to the unwise extraction of a single tooth or two teeth; to malfitting of a rubber or other artificial denture; to the mal or badly fitted bands and springs and wires in the regulation of teeth; to the injudicious use of toothpicks; to the use of coarse tooth-brushes; to the use of corrosive, insoluble dentifrices; to the misuse of wedges between the teeth, or the application of clamps—in short, to anything that would have a tendency or would actually destroy the natural festoon and interproximate gum tissue filling the interproximate space.

Dr. Harlan does not think the disease is of constitutional origin or dependent upon any constitutional malady. He has seen a few cases where the pockets existed above the gum margin with no external opening whatever. The calculus found in the roots of the teeth way up about the apex is, he feels sure, a serumal calculus. The disease is curable when rightly managed, and he goes on to give a very elaborate treatment. Great stress is laid on the removal of all dé-

bris from the pockets by repeated irrigation with dilute boroglycerin, 5 per cent. in warm water, or silico-fluoride of sodium may be used. After this he uses the following:

Sulphate of zinc, sulpho-carbolate of zinc, trichloracetic acid; sulphate of copper, or iodide of zinc. In selecting the respective percentages of the iodide of zinc, the solution should not be stronger than 12 per cent. Sulphate of zinc may be from 14 to 16 per cent.; sulpho-carbolate of zinc should be between 8 and 10, and the sulphate of copper between 5 and 7 per cent.; trichloracetic from 5 to 7 per cent. These dilutions of the drugs mentioned from many experiments are more nearly correct than any previous tabulations that I have made on the subject. It is essential that these pouches and pockets be thoroughly injected by the use of a syringe of course, and preferably a platinum or gold.

If the teeth are loose they should be wired with silver wire, made from pure silver 67 parts, pure gold 33 parts. The silver has a therapeutic effect, and it has been demonstrated that the pathogenic micro-organisms cannot be cultivated on a silver plate. All scalers and syringes must be thoroughly sterilized.

In the discussion Dr. W. J. Younger said:

I find that as far as the theory of pyorrhea is concerned, as also in the necessity for the absolute removal of every particle of tartar, we are entirely *en rapport*.

So far in my treatment I find that lactic acid is the only agent that will bring about this result. When I first commenced using lactic acid in the treatment of pyorrhea it was for the purpose of applying its lime-dissolving property to the pyorrheal calculus. I went on experimenting with it, and after a time, finding from tests made outside of the mouth that its action on tartar was insignificant, I abandoned it. Afterward I discovered cases of long standing that I had treated with lactic acid that were in proper condition with the walls adhering

to the teeth. Then the truth came to my mind that the lactic acid causes, by the irritation it sets up, a denudation or desquamation of the mucous surface of the pocket, followed by a contraction of its walls and an adhesive inflammation, by which the soft tissues become firmly adherent to the hard substance of the root. But it acts not only on the soft tissues. It has a cleansing effect on the cementum, and stimulates the proliferation of connective tissue from the endosteal lining of the cementum and osteoblasts from the alveolar edge. In this manner the same intimate relationship is established between the dental and alveolar tissues that existed before the formation of tartar caused their separation. Of course, you must guard the external gums, mouth and lips from the action of the acid. I used to bathe these parts with glycerine for this purpose, but this agent sometimes produces severe pain on sensitive surfaces of teeth. I have found a new preparation by McKesson & Robbins, called oleo-stearate of zinc, that is exceedingly grateful to the mucous membrane and coats the teeth so as to protect any sensitive points they may have exposed. Then you can use the acid with perfect impunity.

Dr. Haskell, in evidence of Dr. Younger's success in his treatment, made the following statement:

A year ago last June, being in San Francisco, I called upon Dr. Younger; he said: "I want you to see a case which I treated six years ago." The lady six years previous had called upon a dentist for consultation with regard to three upper molars, two right and one left, which were so loose the dentist said they could not be saved; could pick them out with his fingers; they had better be extracted and have a plate. She said, "I have heard of Dr. Younger treating such cases successfully and will see him first." He said, "Madam, neither Dr. Younger nor God Almighty can save those teeth; they are past saving,

I will assure you of that." She called upon Dr. Younger and he saved the teeth, and it was six years after that treatment I saw the lady's teeth; they were firm, not relatively but absolutely firm, and the gum tissues perfectly restored. I could not see any difference between them and the adjoining teeth. It was an eye-opener to me.

Dr. Haskell further stated that Dr. Younger had very successfully cured a case for his wife where some of the molar teeth were very loose. They are now perfectly firm and cured. If these gentlemen are right in their conclusions it would seem that a great many older theories will be exploded. If it comes down to only a chronic inflammation of the pericementum and surrounding tissues, caused by some local irritant as enumerated in the paper, then it seems we ought to be able to effect perfect cures. It will at least be encouraging to the profession to see statements like these come from such sources, and many will be stimulated to make still other efforts to try and overcome past dismal and discouraging failures.

H. H. JOHNSON, D.D.S.

A Recumbent Posture Wanted.

An old woman whose husband was ill in bed sent for the doctor, who came and saw the old lady. "I will send him some medicine," he said on leaving, "which must be taken in a recumbent posture." After he had gone the old woman sat down, greatly puzzled. "The recumbent posture—a recumbent posture!" she kept repeating. "I haven't got one." At last she thought, "I will go and see if old Mrs. Smith has got one to lend me." Accordingly she went and said to her neighbor: "Have you a recumbent posture to lend me to put some medicine in?" Mrs. Smith, who was equally as ignorant as her friend, replied: "I had one, but to tell you the truth, I have lost it."

IS SALT A NECESSARY CONDIMENT?

Some writers have attributed Riggs' disease to the excessive use of sodium chlorid in food. An erroneous claim, we think. We give below an article on the use of this condiment by Carl Fehlaue, M.D., taken from *Food and Sanitation*.

It is somewhat remarkable that, of all the many nutritive salts contained in our food, only one, kitchen salt (sodium chlorid), is deemed by most people to be present in insufficient quantity, wherefore they add inorganic mineral kitchen salt as a condiment to what they eat.

It is quite true, however, that our present day physiologists (who generally seek to defend the use of all commonly-used foods and condiments whatever, and furthermore include alcohol and pungent spices amongst the indispensable) maintain that the addition of salt to our foods is absolutely necessary, because the quantity of salt secreted by the kidneys amounts to from twelve to twenty grains daily, and because so great a quantity is not contained in the foods eaten; hence one must apparently supply the deficiency by the addition of mineral salts, unless the body is to suffer for the insufficiency of saline matter. It is stated that the negroes in Africa, who generally cannot procure salt, show an extraordinary desire for it, and that negro children, if given a piece of rock salt by some passing traveler, suck it with delight, just as our European children do sweetmeats. He who could afford to use salt every day would be regarded as a man of wealth amongst these tribes.

Dr. G. Bunge, Professor of Physiology at Basel, has come to the following conclusions: That on a diet chiefly of animal food it is possible to live without adding salt, and that fishermen, hunters, herdsmen, who live on flesh, fish, and milk, do not salt their food; but that those uncivilized races

which live partly on vegetable food always add salt to it. He gives as a reason for this, that animal foods contain relatively less potash salts and more soda salts; but that in vegetable foods, on the contrary, potash salts are present in much larger quantity, and that therefore it is absolutely necessary to supplement the soda salts by the addition of kitchen salt. Hence it is that we have a great desire for salt as a condiment for potatoes and pulse, which are particularly rich in potash salts.

In spite of all this, we maintain, and can adduce proofs thereof, that those people who live wholly or chiefly on vegetable foods are not only able, without disadvantage to the body, to dispense with salt, but that by so doing avoid the injurious effects which salt has on the health. Of course, the nutritive salts contained in the vegetable food must not be extracted by unsuitable preparation of the dishes (for instance, by prolonged stewing, or by throwing away the water in which they have been boiled). Indeed, the reason why nations living principally on vegetable foods are eager to get salt may be that their manner of preparing their dishes is a false one.

Such washed-out vegetable foods certainly taste flat, so that salt seems a suitable addition. Flesh foods, on the contrary, being cooked in only a little water, lose less of their nutritive salts; but the flesh from which beef tea and such like has been made, and therefore is quite cooked out, tastes no better than the washed out vegetables.

But even the amount of salts which, according to Bunge's view, should be added to vegetable foods is very small, and far less than the usual immoderate consumption which must act most injuriously on our organs, and more particularly on the kidneys. Professor Bunge on this point remarks: "I must, however, say that the quantity of salt which most people add to their food is far too great. Salt is not only a food, but a condiment, and easily seduces, as all condiments do, to overeating. With

cereals and legumes, for instance, one or two grams of salt per diem would suffice, with rice a few decigrams, instead of which the majority of persons consume some twenty or thirty grams daily, and even more."

But even the small quantity of salt which Bunge thinks necessary is not really required. In fact, just pulse and potatoes (the latter boiled in their jackets or roasted over hot ashes), will be found particularly palatable by those who wish to break themselves from the salt-eating habit, without any addition of salt whatever. For they are exceptionally rich in nutritive salts as a whole, even though the soda-salts are only present in small quantity compared to the potash salts. The best proof we have that the use of mineral salt is unnecessary, and indeed injurious, is the fact that those persons who have made no use of salt for years have quite an aversion to dishes containing it, even if only present in trifling quantity; whereas if mineral salt were really a necessary food, they should have an intense desire for it. And this disgust for food prepared with salt we have particularly observed amongst vegetarians—that is, people living on a vegetable diet, eating no flesh meat at all.

A Low Fusible Metal.

Bismuth.....	48 parts.
Cadmium.....	18 parts.
Tin.....	19 parts.

Melts below the boiling point of water and is very hard. Melts at so low a temperature that it can be packed with the fingers. A common plaster impression can be poured at once without waiting for it to dry; can even be poured in water.

A New Wart Cure.

Chromic acid, one hundred grains to the ounce, applied frequently with a toothpick, will remove small warts or similar growths.

HOW TO PLACE A CONTOUR GOLD FILLING ON A PORCELAIN FACE, ANTERIOR CROWN.

Frequently we have to crown centrals and laterals that once had large contour fillings; or, possibly, the teeth adjoining the one to be crowned have conspicuous fillings. A plain porcelain face in either case would be prominent for the want of a filling, and the distinguishing features of the crown may be very much disguised by a neat gold contour on one corner.

This may be accomplished without weakening the face at all.

After the face has been ground and fitted to the case, before backing it up remove it and bend a small piece of 24k. 28-gauge pure gold around the labial and approximal side of the face, where the filling is to be. Now grind off the corner that is to make room for the filling, leaving it shaped on the labial side, just as you wish the filling, and bevel back towards the pious. Punch the holes in the backing, using the same gauge and carat gold as before. Burnish well against the back of the tooth and into the nook cut off of the corner. This will require frequent annealing and careful work, but can be easily done. Next, trim the over-hanging gold smooth with the labial side of the tooth where the corner has been cut off. Now place the piece of gold first bent over the corner of the tooth, before it was cut off, in position to work, where cut to form a joint with the backing at the labial surface. After the joint has been made between the backing and corner of gold, place them in position and secure with wax. You can now remove the porcelain face and the two pieces of gold held by the wax inserted. Flow 22k. solder over the backing at the point where the corner was cut off, thus uniting the two pieces of gold and making a solid gold filling.

A contour filling made in this way causes no strain on the porcelain face, but rather takes the pressure from it while in use.

R. R. J.

LIVE PULPS REMOVED CATAPHORICALLY.

H. H. JOHNSON, D.D.S.

This is not a new operation, and my apology for opening the subject is that I might present a case with some novel features. A lady, aged about thirty-five, had broken a central in such manner it was necessary to cut it off and crown it. Upon beginning the operation it was found that the nerve, which was at first supposed to be dead, was alive, but had receded above the gum line, the pulp chamber being completely filled with a calcific deposit. It being desirable to open the canal at once cataphoresis was brought into use. Before ascertaining the condition of the nerve the application was made, but with little success, the dentin remaining sensitive to the bur, even after two applications of the current with a saturated solution of cocaine.

The patient being willing, it was decided to bur in until the pulp was exposed before making another application. It was then that the discovery of the secondary deposit was made. Having cut through the calcific deposit and reached true dentin, the application was again made with complete success in about twenty minutes. The nerve was removed with a brooch without the slightest pain.

This case may explain the cause of some few failures to get results with cataphoresis. Where the tubuli have been closed by these secondary deposits, the only avenue for the ingress of the cocaine has been cut off, and perfect results may not be looked for.

While on this subject, I find an interesting item in February *Dental Cosmos*, by Dr. A. F. Wineman.

In his operation for the removal of living pulps, after anesthetizing the nerve with the positive pole in the cavity, he would reverse the poles, but instead of using the large ball end point on the negative pole,

he would attach a fine platinum needle, which he thrust through the anesthetized pulp up into the canal. In a few minutes the nerve would be entirely decomposed and the root could be cleaned and filled at once. By introducing the platinum needle as above, and continuing with the positive pole, he had been enabled to dry and sear the nerve onto the needle, and remove it whole without any trouble.

This seems to be a novel idea, and is worth a trial.

Cement and Amalgam.

BY T. F. DRISKILL, D.D.S.,
Corsicana, Texas.

On reading Dr. Dunn's method of cement and porcelain powder, it leads me to report the following:

Twelve years ago a patient desired me to extract a right superior first molar. On examination I found a large buccal cavity extending from near the gum margin well up into the grinding surface. The nerve not being exposed, I advised a cement filling as a temporary stopping. While mixing the cement I concluded to dust in about a tenth part of amalgam. A few days ago the good lady returned to have some other work done, and to my delight I found my cement-amalgam doing good service.

No, I did not remove it. It has not as yet fulfilled its mission.

Polishing Pastes for Metal.

The *Druggists' Circular* gives the following:

No. 1.	
Rotten stone	1 part.
Iron subcarbonate	3 parts.
Lard oil, a sufficient quantity.	

No. 2.	
Iron oxid	10 parts.
Pumice stone	32 parts.
Oleic acid, a sufficient quantity.	

J. H. CROSSLAND, D.D.S.,

President of the Alabama State Dental Association.

J. H. Crossland, D.D.S., is a native of Alabama (the State that enacted the first dental law). From early boyhood he was reared in Montgomery, his present place of residence. He graduated from the Baltimore College of Dental Surgery in 1888, and has been since his entrance into the profession one of the most active men in the Alabama State Dental Society. He is a splendid type, both physically and mentally, of the younger generation in the dental profession. While he is a devotee to his chosen calling, yet he finds time to gratify the martial spirit that is in him; he is an officer in the cavalry branch of the Alabama National Guard.

Surely it can be said of the genial gentleman that he stands higher than any other man, either in civil or military rank, as he measures six feet and six inches.

The *Reform Wochenschrift* recommends diamantin (oxide of tin) as a splendid material for polishing instruments and ground-off porcelain teeth.

THE American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription \$2.00 per year; \$1.00 for six months—including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, November 11, 1897.

Gingivitis and Silver Nitrate.

A most stubborn case of gingivitis with considerable recession and long pedicles of gum tissue between the teeth, and the teeth sensitive and sore to occlusion, which resisted long, varied and continued treatment with modern drugs, is improving rapidly with the use of silver nitrate solution applied with a sable hair pencil. The exposed cementum is no longer sensitive; the slight pericementitis is relieved, and, altogether, what was fast proving an incurable case is being cured.

Now the question comes up: Are we not too often found running after new remedies, when, in reality, we have better ones in the old stand-bys? Silver nitrate lacks much of being a new drug. Geber, of the eighth century, was the discoverer of it. Ever since it has been a kind of sheet-anchor for diseased mucous surfaces, until we listened to the seductive words of the modern chemist. Medicine, at best, is impirical;

but observations, founded upon facts repeatedly demonstrated, is the evidence of value in anything. Surely there is nothing better for many cases of inflamed mucous surfaces than our old remedy, silver nitrate.

What is the Difference Between a Dental Office and a Cotton Exchange?

The use of cotton for separating teeth is, without question, good practice; but, like all other good things, it is sometimes abused. A lady on her way down town was met by a friend, who asked her if she was going shopping. She replied that she was not, but was going to No. — Whitehall street. "They call it Dr. —'s dental office," she said, "but I think it is more like a cotton exchange, as I have been going there every few days for the past three weeks, and accomplished nothing but to exchange the piece of cotton between my teeth for a fresh piece."

The *Health Magazine*, edited and published by physicians in Baltimore, is a valuable journal for every family to have.

This reminds us to say: How is it that a man calling himself professional can afford to spend so little for literature, professional, semi-professional and non-professional? Good literature leads to good thoughts, good thoughts to good acts, and good acts to distinction.

Carborundum Wheels.

Carborundum wheels should be run very rapidly, says *Ash's Quarterly*. It prevents the rapid wearing away of any soft places that may be in them, and thus tends to keep them true.

Some surgeons who find it impossible to make their hands perfectly aseptic, wear gloves while operating. Not rubber gloves, but the cheap kind, such as waiters gloves, which cost about sixty-five cents a dozen.

Jamaica Dogwood vs. Cataphoresis.

In a running discussion on cataphoresis in the Pacific Coast Dental Congress, Dr. J. D. Hodgen, as reported in the *Stomatological Gazette*, says: Fluid extract of Jamaica dogwood has been in my hands a medication for which I am very grateful, used in twenty and fifty minim doses. When it does have its best effect, I would not trade an ounce of the fluid extract of Jamaica dogwood for a wagon-load of cataphoric apparatus. That is saying a good deal when every one who knows me knows I am wedded to cataphoresis. When it does take effect it is almost immediate, and we have no trouble; can work right along, knowing that our patients are not being tortured by the operation. I have a family of patients, and before I learned of this dogwood, I would rather see most any man come to my office with most any kind of a bill than one of these patients. It was with perfect dread that I saw them. I actually sent two or three of them away; I could not work for them. With this drug I have been enabled to work for the entire family, and one girl had the impudence to go to sleep while I was excavating her tooth. I have found that there are cases where it will not work. When it does, it works most beautifully.

USEFUL LITTLE THINGS.

INVESTMENT FOR A TOOTH.

For quick soldering, wrap the tooth to be soldered well with asbestos cloth, cutting out the wrapping just where the solder is to flow. Make a pit in the soldering block, into which place the wrapped tooth and pack asbestos fiber around it. This investment is as efficient and safe as one of plaster and sand.

WOOD ALCOHOL.

Wood alcohol is much cheaper than grain alcohol, but when used for annealing gold the latter should be placed on mica and

held over the flame, as the latter deposits soot on gold if passed through it.

ROLLING AN INGOT OF GOLD.

If a "melt" of gold filings or scraps when run through the rolling mill has a leafy or feathery surface, heat the ingot until the surface "sweats" or slightly melts. Run it again through the mill and anneal; it will then "work" satisfactorily.

MAKING PAPER PELLETS.

A small bore gun-wad cutter may be used to cut bibulous paper into convenient size for cavity drying.

SPONGE HOLDER.

A Maffat syringe rubber bulb, split half through, makes a good holder or envelope for a piece of sponge for wetting corundum wheels.

IMPRESSION FOR CROWN.

In taking an impression of a tooth for a cap crown, if a tooth is on either side, a matrix should be first fitted between them in the approximal space and replaced in the impression afterwards, before pouring in plaster or fusible metal.

PACKING PINK AND RED RUBBER.

In packing a flask with both pink and red rubber, have the red rubber so that it will easily flow over the pink into the vents and it will seldom "show through" the pink when the rim is polished.

COPPER TACK PIVOT.

A copper carpet tack wrapped with annealed gold-foil makes a very good pivot, to which a flat-back plate-tooth may be soldered with 18 carat gold solder.

B. H. TEAGUE.

Dr. C. E. Kells, of New Orleans, after a protracted outing north, is now at Lithia Springs, Ga., where he will remain till "frost." The office of the WEEKLY had an appreciated visit from him.

The AMERICAN DENTAL WEEKLY is being heartily received all over the country. A quick method of receiving and imparting information is appreciated.

Who Was Legally Responsible?

Among the recent bad effects consequent upon the use of the X-ray, the following, taken from an exchange, is of peculiar interest, involving, as it does, a question of legal liability:

Miss Josie MacDonald, of New York, is lying at her home in a pitiable condition as a result of a twenty-minute exposure to X-rays. The young woman had for some time previous been suffering with intense pains in her jaw. She went to Drs. Shields and Jernigan, dentists, who diagnosed her disease as necrosis. In order to determine the exact cause they decided to have an X-ray photograph taken of the jaw to see if there was an old root there. The young woman was taken to the laboratory of a Mr. O'Connor, who had been recommended to the dentists. The first photograph not being a success, on account of too short an exposure, another was taken. The second was taken the next day, with a twenty-minute exposure, and proved the dentists' diagnosis correct. A few days afterwards the girl's face began to swell and grow black. Dr. Henry Griswold was called, and he commenced treating the case as he would an ordinary burn. The hair on one side of the patient's head began to fall out, and in a short time that part of her scalp was bare. Her face was blistered, and sores formed all the way down her neck, shoulders and arm. A scab formed over the blister, and when it fell off disclosed the raw flesh. Her left ear swelled up, and she lost her hearing on that side. Constant applications of oil have been necessary day and night to allay the pain arising from exposure of the flesh to the air. Dr. Griswold said that he could not tell who was responsible for the condition of the patient, and Miss MacDonald has placed her case in the hands of attorneys, and action has commenced against the dentists.

Eucaïn causes hyperemia, says Dr. Görl, and has to be used with care wherever the condition shows an inclination to hemorrhage.

F. A. B.

Constant Shedding of Finger-Nails.

Dr. D. W. Montgomery, of San Francisco, reported at the late meeting of the American Dermatologic Association the case of a man thirty-five years of age who had been troubled from his birth with a constant shedding of the finger-nails. His mother had been affected in the same manner, in her case the nails being shed every eight months. Two uncles were similarly troubled. No cause could be assigned for this peculiar manifestation, and it was not associated with any change in the hair or teeth.—*Medical and Surgical Reporter.*

To Obtain a Metal Mandrel of a Root.

To accomplish this Dr. Whitman, in the *Ohio Dental Journal*, says:

Take a thin copper strip and with pliers secure the circumference of root in the usual way. Remove the band thus obtained, being careful not to change its shape. Press it into cuttle-fish bone to the depth of its width; remove the bone that is inside the band, place around it a ferrule and pour into it fusible metal or soft solder. When cool remove ferrule and strip and you have an accurate mandrel that will be found a great aid in fitting a band to some roots that are extremely difficult as well as painful to fit directly to root in the mouth. Cuttle-fish bone may be obtained at drug stores.

Cocaine for Lockjaw.

A Mexican boy, about twelve years old, had tetanus, and cocaine was prescribed in the usual sized doses, but the druggist, by mistake, gave ten times the usual amount. This was not known until after the remedy had been given, but the result was complete recovery! The same was tried in another case, with a similar result.—*Bowman in Medical World.*

To Make a Vulcanite Scraper.

To make tools for the laboratory is often necessary. Dr. Kerns, says the *Ohio Dental Journal*, makes a scraper as follows:

Take an old case-knife of good metal and grind the edge square, make the blade rounding at point. This makes a scraper that will cut better than any, and is easily sharpened by holding it square against the stone. It works like a piece of glass shaving wood. It is best to break off about two-thirds or half of the blade before sharpening.

Alcohol and Temperature.

Alcohol does not elevate body temperature by increasing the number of heat units. Its effect is to accelerate the heat action and thereby drive the blood from the centers to the extremities. Vital depression follows its action, and while more heat may be created under its influence, so much heat is dissipated that the temperature nevertheless falls in consequence of the too rapid destruction of the tissues.—*Health Magazine*.

For Flatulent Dyspepsia.

The *Medical and Surgical Reporter* gives the following as good for this trouble:

R Sodium bicarbonate.....	1 drachm.
Tincture ignatia.....	40 drops.
Tincture senecio.....	1 fl. ounce.
Syrup bitter orange peel....	1 fl. ounce.
Alcohol, containing ten per	
cent. of chloroform.....	2 fl. drachms.
Water	6 ounces.

M. S.—Tablespoonful three times a day.

To Rid Rubber Dam of Odor.

Put the whole piece in water to soak ten or twelve hours, remove and wash it with clean soap-water, dry it by wiping, roll together, and place it back in the box for use.

Ferro-Styptin.

This is the latest hemostatic put upon the market by Dr. A. Eichengrün. It is a dark yellow crystallin powder, very soluble in water. Its taste, although astringent, is not as disagreeable as that of chlorid of iron. While it causes the blood to clot, it does not cauterize the tissue. The inventor claims its antiseptic properties to be its greatest advantage, compared with other preparations. So says the *Reichs-Med.-Anz.*

F. A. B.

Old Burs as Plug Finishers and Burnishers.

W. Dunn, D.D.S., Florence, Italy, says, old burs which are not worth resharp-ening do admirably as plug-finishers and burnishers if run for a few minutes against an Arkansas stone or steel anvil; and when used, made to rotate backwards (from right to left) in the engine.

Quickly Made Regulating Plate.

A quick method of making a small plate, so often used in regulating teeth: Take an impression in impression compound, chill in ice water, remove from tray, cut from same a plate just the size wanted, chill and dry, then press in moldine, remove and pour Mellott's fusible metal, press on the metal with napkin, thus forcing metal in every part. Finish same as vulcanite plate.

SOUTHALL DICKSON.

They Like the Weekly.

Dr. W. Geo. Beers, editor of that fearless and good journal, *The Dominion Dental*, says: "I've got to like the 'Bantling' very much already." And so they are expressing themselves from Canada to the Gulf.

Dr. Tucker, of Roxboro, N. C., says: "It's just what I have been wishing for."

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., NOVEMBER 18, 1897.

NO. 10.

VALUE OF DIFFERENT ANTI-SEPTIC AGENTS.

Before the Illinois State Dental Society, Dr. A. H. Peck presented some very interesting experiments on this subject. We herewith present the report in full:

These experiments were conducted in the following manner: Tubes, containing on an average eight c.c. of sterilized broth were used. The broth was infected with the saliva of various members of the class. In connection with each set of plants a control tube was used, which latter invariably presented unlimited growth.

The observations from which these results were compiled were carried on through a period of three days.

The tube containing one drop of oil of cassia presented no growth.

Oil of cinnamon, one drop, no growth.

Dr. Black's 1, 2, 3, one drop, no growth.

I have been asked by many about the use of 1, 2, 3, which is composed, as you well know, of cassia, carbolic acid and gaultheria. Whether or not it is irritating to the soft tissues as is cassia, I will simply state that I have experienced no such trouble, and Dr. Black is inclined to think that when the three ingredients are properly mixed, there is more or less of a chemical union between them, so that the individuality of each separate agent is lost to a greater or less extent.

Oil of cloves, one drop, no growth. I will state that in connection with this agent I was much surprised to find no growth in

the tube containing one drop, and several subsequent plants were made that the result of the first might be verified, which was invariably the case. Since oil of cloves has proven to be such a potent antiseptic, and also because of its soothing, quieting effect on irritated, soft tissues, it has become a favorite agent in my practice.

Beech-wood creosote, one drop, no growth.

Myrtol, two drops were required to prevent growth.

Cajuput, five drops, no growth.

Eucalyptus (Sanders'), six drops, no growth.

Eucalyptus (Merck's), seven drops, no growth.

Carbolic acid, 95 per cent., three drops, restrained the growth for three days, after which time the bacteria developed abundantly.

Gaultheria, five drops, growth. I will say here, that when growth is reported as following the use of an agent, that said agent was used up to a quantity that formed a saturated solution in the broth, thus rendering it useless to experiment with larger quantities.

Terebene, five drops, growth.

Eugenol, eight drops, growth. One of my greatest surprises occurred in connection with the results of eugenol. I had been in the habit of using it a great deal and had considered it quite an effective antiseptic, but finally had to give it up as absolutely worthless as such.

Bichloride of mercury, one to one-thou-

sand solution, six drops restrained the growth, i. e., the bacteria developed to a certain extent.

Hydrogen peroxide (3 per cent.), four drops, no growth.

Peroxide of hydrogen (Marchand's), three drops restraint, five drops, no growth.

Pyrozone (3 per cent.), four drops restraint; five drops, no growth.

Borolyptol, ten drops, no growth.

Euthymol, ten drops, growth.

Listerine, ten drops, growth.

Formaline (10 per cent.), five drops, no growth.

Resorcin (15 per cent.), six drops, no growth.

If these experiments are to be relied on, many of us will find it to great advantage to change our favorite remedies.

H. H. J.

DEVELOPMENTS IN CATAPHORESIS.

BY H. H. JOHNSON, D.D.S.

It has been observed by some operators that sloughing of the gum may occur around a tooth after using cataphoresis, usually, of course, where the insulation is not complete. Dr. Black says, "This may be caused by current driving the bodies of micro-organisms, which may be collected around the neck of the tooth, into the tissues, causing its death."

Dr. J. G. Reid, in Chicago Dental Society, reported in the *Dental Review*, says: "Speaking of insulating the tooth, the filling and the clamp, it is just as necessary to insulate the patient in the chair."

He says, "you get some very unpleasant results sometimes by the patient just simply having a foot on the foot-rest of the chair, especially if the shoe-sole be a little damp." On this line it would be well to see that the patient does not touch anything about the chair which might cause a ground connection. A fountain spittoon would certainly

cause such a result; or, in fact, any piping having a ground connection.

Dr. E. MaWhinney, in same report on this line, says, "he had noticed, if he applied additional moisture with cotton grasped in metal pliers, and at the same time touched the patient or the chair, a shock would be produced. He now uses a Dunn syringe for applying more moisture.

Dr. Ely had same trouble, and obviated it by insulating his pliers with which he applied the moisture.

Dr. Price Cheaney found in hypersensitive teeth that the addition of sulphate morphia to the solution worked like magic. He also gives a good way of testing the poles. Place the two poles in water and turn on a strong current, bubbles will rise from the negative. The two ends of the wire immersed in the water must be of the same metal.

Dr. J. H. Phothero cites an interesting case of a patient where the negative electrode was placed on the cheek, under the rubber dam-holder. It remained there twenty minutes, and when removed a scar presented nearly an inch and a quarter in diameter, while the tissue under the center was burned almost an eighth of an inch deep. It required eight weeks to heal, and left a cicatrix. Another case produced a bad blister in the hand.

He uses the one hundred and ten volt current, which may explain to some extent the cause of this unfortunate trouble. As each one discovers some new feature, we find that there are almost an unlimited number of little points to be observed if we shall expect constant success in cataphoresis.

A Small Point.

In capping small exposures, or when placing a layer of cement over the surface of sensitive cavities, Dr. J. H. Hughs, in *Dental Review*, says make the paste or cement into a little ball and use a bit of spunk in the pliers as carrier and spreader.

HOW TO CONTROL CURRENT AND ANESTHETIC IN CATAPHORESIS.

BY WILLIAM H. RICHARDS, D.D.S.,
Knoxville, Tenn.

It is useless to call the attention of those who have had to contend with the disposition of electric fluid to follow any other fluid or by path whatsoever to the obstacles in the way to success.

But for those who are feeling their way in this new field, I must say that gold crowns, amalgam fillings, saliva, instruments, and the very fluid you wish to urge into the tooth, seem to be endowed with total depravity, and act individually and collectively to thwart your purpose.

To corner the conditions, and concentrate the artful dodger upon the desired spot may be accomplished by applying to any tooth suitable for cataphoresis a thin rubber tube—made of rubber dam—(no such tubes are to be found upon the market). The object of this article is to tell you how to make them. The application and necessity for same is apparent, when you think of it as a non-conductor as well as a vessel for holding your fluid when you wish it to keep the current in the same place, at the same time insulating any and every other objectionable surrounding.

Take a straight wire, $\frac{1}{8}$ inch in diameter and one foot in length, cut a strip of rubber dam half as long, which, when one end is caught upon one end of wire and held until the end is drawn over the other end of wire, the rubber will have an overlapping edge of one-sixteenth of an inch; sandpaper as in repairing a puncture, and apply some rubber cement to edges; lay away until properly united, or until it is dry enough to hold; clip one end and the tube will come off. Cut a section of this and slip over the tooth, and urge down under gum if you have buccal cavities. Tube may be held off from the cavity or tooth, at any point, by

a pellet of cotton containing the medication.

Another way to prepare tubes is to take glass tubes of different sizes, put around them thin, soft, or vellum rubber, make the joint good; immerse in plaster of paris. When hard, vulcanize.

It is sometimes necessary to make a cap for a tooth which you do not wish to cut. A given amount of space is desirable for the cement. Cut a piece of tubing which will reach from gum to curve of morsal surface, slip over the tooth and take impression; make metal model from the impression, from which the desired crown can be made.

DENTAL OPERATIONS DURING PREGNANCY.

In an interesting article before the Ohio State Dental Society and published in the *Dental Cosmos*, Dr. L. E. Custer brings out some good points bearing on this subject. He says that shock as most often seen by the dentist is of the immediate variety, and frequently observed before the patient leaves the chair. But there is another variety, an insidious form of shock, in which the symptoms appear later. The patient may leave the office apparently calm and unaffected, may have a good color, quiet pulse and respiration and nothing appear wrong. But a little later insomnia develops; the pulse becomes soft, quick and rapid; there may be chills followed by fever and the depression may last for days or even weeks, only to terminate into some nervous disorder. The irritation of the trigeminus at this time might, he thinks, bring about bad results. Operations should specially be avoided during the third, fourth and eighth months and also during those periods when menstruation would have occurred. Palliative treatment and temporary fillings should be resorted to; cataphoresis and obtunding agents must be used. At the same time, he thinks, something should be done to

diminish the mental as well as the physical nervous susceptibility. Combinations of whisky and morphine is an excellent agent as recommended by Dr. Marshall. Antikamnia and codeia is good, as are also "migraine tablets," composed of acetanilid, monobromated camphor, and citrate of caffeine. A full dose of chlorodyne before operating produces good results. All of these agents reduce the sensibility to pain and give ease to the mind. The remedy which he finds most satisfactory is "bromidia" of which each fluidrachm contains fifteen grains each of chloral hydrate and potassium bromid, and one-eighth grain each of extract cannabis indica and hyoscyamus. This preparation lowers the activity of the neuromuscular apparatus which controls uterine contractions. It is hypnotic, antispasmodic, analgesic, and anesthetic; it diminishes both physical and mental reflex activity, and also produces a pleasing mental condition. If the patient be very nervous he usually commences the bromidia treatment several days in advance.

Agreeing with Dr. H. A. Smith, it seems that the subject is an important one and well worth considering. The effects of such nervous shocks may go to an extent not easily demonstrated. Who can tell what impressions may be transmitted to the child, either mentally or otherwise? May not such impression transmitted at such times, be the solution of an unusual and unwarranted dread some patients have of dental operations, when these same persons have plenty of nerve for other trials of life. It is not an unusual thing to find people who have what might be termed an abnormal intensified fear of any operation about the teeth, when they are conscious at the time that it is a foolish and unnecessary fear. It is purely a mental aberration, but one which they seem to be wholly unable to control, and it lasts them through life. If these impressions can be proven to be from shocks produced during fetal life, the great importance of the question would be very apparent.

H. H. JOHNSON, D.D.S.

Northern Illinois Dental Society.

MT. CARROLL, ILL., Nov. 15, 1897.

American Dental Weekly:

Enclosed please find copy of resolutions adopted by the Northern Illinois Dental Society at its 10th annual meeting held at Rockford, Ill., October 20 and 21, 1897.

OFFICERS, 1898:

President, C. B. Helm, Rockford.

Vice-President, Louis Ottofy, Chicago.

Secretary, J. W. Cormany, Mt. Carroll.

Treasurer, M. R. Harned, Rockford.

Member of Executive Committee, E. J. Perry, Chicago.

JAMES W. CORMANY, Sec.

To the President and Members of the National Dental Association, and to the President and Members of the National Association of Dental Examiners:

GENTLEMEN:—At the tenth annual meeting of the Northern Illinois Dental Society held at Rockford, Ill., October 20 and 21, 1897, the undersigned were appointed a committee to draft and present to your Associations suitable resolutions, with a view to remedy an existing evil regarding the interstate practice of dentistry, and we herewith submit the following for your consideration:

Whereas, A legal practitioner of any one of the United States, who desires to remove to another State, is, under the existing laws, compelled to comply with certain requirements of the dental law of that State; and

Whereas, In many instances, such legal practitioner (sometimes of many years' experience) is subjected to a more or less severe theoretical examination, which cannot even be successfully passed by many who are fresh from the college halls; therefore be it

Resolved, That the National Association of Dental Examiners and the National Dental Association be, and are hereby, requested to enact such rules, or to secure such

modification of the dental laws of the various States, which, under reasonable restrictions, will enable competent practitioners to remove from one State to another without being compelled to submit to provisions which are eminently unfair to a large number of capable dentists.

LOUIS OTTOFY,
W. H. TAGGART,
M. L. HANAFORD.

Attest: Committee.

JAMES W. CORMANY, Sec.

Nov. 10, 1897.

Consumption Not Inherited.

We make the following extract from an editorial in the *Maryland Medical Journal*, relative to this matter:

The public generally believes that consumption is inherited, while the profession has always taught that it is not the disease, but the predisposition or susceptibility which is handed down from parent to child. The disease, however, is so dreaded that the offspring from consumptive parents, disheartened perhaps by a gloomy outlook, are quite ready to accept the inevitable, as they think, and take no steps to ward off the disease.

Polishing Material.

In polishing gold work, fillings or vulcanite, no material gives so brilliant results as "Electro Silicon," a polishing powder sold everywhere at ten cents per large box. For mirrors and window glass it is used on a wet cloth, the polishing being done after all is dry.

A. T. PEETE, D.D.S.

A Singular Anesthetic.

A dentist at Mühlhausen, Germany, having made several attempts at extracting some teeth, began thereon to curse and slap the patient's face. He was fined \$100 for his kind treatment.

Dr. Evans, of Paris, Dead.

The following by the Press Association we take from the *Atlanta Journal*. The cut they also kindly furnished:

PARIS, November 15.—Dr. Thomas W. Evans, the famous American dentist, who facilitated the flight of the ex-Empress Eugenie from Paris in 1870, died suddenly here this evening.

Dr. Evans was born in Philadelphia in 1823. After making a reputation in this country as a skillful dentist, he settled in

DR. THOMAS W. EVANS,

The American Dentist, Who Acquired Fame
and Fortune in Paris, Dead.

Paris in 1848, where, under the patronage of Emperor Louis Napoleon, he became a very distinguished practitioner, and was patronized by many of the crowned heads of Europe.

Dr. Evans was active in the establishment of the Red Cross Society, and in organizing the American ambulance corps sent out under the auspices of the French army in 1870.

When the French empire fell, Empress Eugenie was in great danger from a mob which had collected around the palace, but Dr. Evans hurried her into his carriage and concealed her in his residence until he was able to carry her beyond the walls of the

city. On this trip he pretended to be reading a newspaper, which he held so as to shield Eugenie's face from observation.

The doctor was the proprietor of the *American Register* in Paris, and his fortune amounted to millions of dollars. He was the author of several books, and was a man of culture and refinement. In imperial circles he was a great favorite, and was an honored guest at many royal events.

His high position in Europe was due more to his intellectual superiority and literary talent than to the mere fact that he was a successful and wealthy leader of his profession.

Dr. J. R. Woodley.

In our last issue we announced the death of Dr. Jos. R. Woodley, of Norfolk, Va.

He was a man of rare qualities. His unselfish devotion to the profession, his ethical regard for his brethren had endeared him to the Virginia dentists. There was not a young man struggling to advance, in his own city of Norfolk, that did not look up to and revere him. His charity was almost unprecedented.

We shall never forget his services rendered at the meetings of the Southern Dental Association, held at Old Point Comfort in '87, and again three years ago.

Dr. Woodley was a Virginia gentleman of the old school.

One incident connected with his life will better illustrate his character and lay bare the secret of the strong attachments of which he was the object, than, perhaps, anything else we could say:

He was a soldier in the Confederate army; born in Tide Water, Va. General Lee needed the services of some scout who would watch the movements in and around Fortress Monroe, and report daily to him. This duty was entrusted to Dr. Woodley. He bought him a fisherman's boat and the necessary equipments. Dressed in plain garb, with his bare feet and rough clothing,

with an old straw hat, he would visit the fort in the early morning selling his fish, crabs, etc., and they were always of the best. This special fisherman was the particular favorite of the leading officers, and was permitted to go where he pleased. When the shades of evening would come he would go over to the shore of Virginia, and before the morning, by means of a fleet courier, the information of all that was taking place would be in General Lee's possession. It was a duty that could bring him no fame. The danger was imminent, and, like the sword of Democles, death hung over his head every hour. The chance meeting of an acquaintance meant his death.

He did his duty faithfully right along, and was fortunately successful, owing to his prudence and wisdom in escaping detection.

In the social circle, at the meetings of his own State society, and in the Southern Dental Association he was a safe adviser, an active participant in whatever was going on, a sincere friend and a true man in every respect.

The Virginia dentists and the dental profession have lost one of their brightest members. We would respectfully extend to his family and friends, and to the dentists of Virginia and North Carolina our sympathy, and join with them in expressions of both admiration and regret.

Neuralgia Remedy.

The *Presse Médicale* states that a subcutaneous injection of 15 to 60 drops of a solution of chloroform 10 grams, and guaiacol 6 grams, always soothes the pain, improves the neuralgia often, and occasionally cures it. The bottle should be sheltered from the light and kept in an opaque paper. The injection should be made as close as possible to the nerve trunk, once a day, or once in two or three days. These injections have also been found effective in small surgical operations as an analgesic.

THE SOUTHERN DENTAL ASSOCIATION.

**Its Meeting at St. Augustine, Fla.,
February 22, 1898.**

BY W. W. H. THACKSTON, D.D.S.

As has been already announced through the professional journals, the Southern Dental Association will hold its next meeting in St. Augustine, Fla., February, 1898. The circumstances, considerations and environments of this annual meeting cause us to regard it as one of striking interest and importance to our brotherhood not only of the South, but of the country at large.

While as a Southern organization we are intact, we have formed an alliance with and become an integral part of a National Association, which augments our strength, enlarges our resources, and increases our opportunities for further progress and developments. We have created new relations and assumed new obligations and requirements, which Southern honor and Southern chivalry stand pledged to abide and fulfill.

A large and invaluable accession has been made to our membership and territorial domain; and as the St. Augustine meeting will inaugurate an epoch in our history and put in operation the changes, plans and influences agreed upon between the two leading Associations at Old Point, it becomes a matter of the most grave importance that every member, who *possibly can*, should not only be personally present at that meeting, but go prepared to make it the greatest and most imposing assembly in the history of the Association. Let us gather at the Ponce de Leon with full ranks and in solid column, and make such a demonstration of our interest, zeal and enthusiasm as will startle and astonish the new element in our membership and excite the admiration of our allies and confederates of the National. Let us show that the Southern is the ban-

ner branch or section of the National compact.

In the days of the Scottish chiefs, when danger threatened or peril impended, or when any great or notable event was to transpire, or be commemorated, the *slogan* was sounded, the fiery cross was lighted, and pibroch and torch, sounding and blazing, were swiftly borne through all the borders, and from heath and morass, and highland crag, poured forth the kilted clansmen in answer to the call.

Our Chief, from the banks of the *Dan*, has sounded the slogan, has fired the torch and heralded his call, and feels no fear that the clansmen will either lag or falter.

Let all *who can* go to St. Augustine, and make the meeting memorable in the annals of the Southern Association, make the meeting an honor to our *Southland*, and an evidence of our fidelity and devotion to the interests and advancement of our common calling.

Farmville, Va., November 5, 1897.

They Met.

The Rev. Sam Jones once referred to an old woman who said "I only have two teeth, but, thank the Lord, they meet." There was more philosophy in that remark than the old woman knew. Teeth are primarily intended to cut and grind food. They cannot do this unless they "meet." The natural organs poorly articulated cannot render effective service. Substitutes poorly articulated cannot render any service. Lower plates will tilt and move about, and upper ones will drop when brought in contact with those of the lower plate. If you don't know how to articulate teeth, go off and learn. You owe it to yourself, to your patient, to your neglected laboratory, and to the philosophy of prosthesis. D. D. A.

Wonder why some of the monthlies have not said "howdy"?

A Combination Filling without Mercury.

BY H. C. HERRING.

I know a man who claims to have discovered it. I know another man who had saved thousands of teeth by the very same method long before the junior claimant was born. It is this: Take equal parts of the powder of cement and filings of any standard alloy placed upon the slab separately. With the liquid make a very thick, creamy paste with the powder; now gradually add the filings, rubbing and working vigorously until the mass can be taken between the thumb and fingers. It is now ready to make the filling which should always be done under the dam. This combination is intended for that class of back teeth where, on account of insufficient tooth structure, amalgam is not indicated, and where cement so often fails. Its sticking qualities render under-cuts unnecessary; simply remove decay and shape the margins. As in all other plastics, direct the pressure toward the cervical wall. As soon as the hardening process commences, stop. After a little drying by the aid of the hot-air syringe, it can be trimmed and polished at once. It is more durable than cement, and for that class of teeth already mentioned more lasting than amalgam.

DR. H. J. RAY.

President of the South Carolina Dental Association.

Dr. H. J. Ray, of Aiken, S. C., is a native Carolinian of only thirty years. When a mere boy he determined to make dentistry his life-work, and began practicing when quite young. He received his education at the South Carolina College, after which he spent two years with a preceptor, and graduated with distinction at the University of Maryland in '88.

Has always taken an active interest in the work of the South Carolina Dental Association, and at its last convention was unanimously elected president.

In 1893, he was married in Saratoga, N. Y., to Miss Stratton.

Formalin in Gas Form.

A manufacturer of chemicals in Germany uses formalin in specially constructed lamps for the disinfection of large rooms. They say it destroys even the most resisting germs. Formalin is put up in pills of 1 gram, which equals $2\frac{1}{2}$ grams of the 40 per cent. liquid preparation.

A Pun That Cost a Life.

According to Stowe, Sir William Collingborne was executed in 1484, during the reign of Richard III., for making the following pun, which, in his day, was considered excellent wit:

"The rat, the cat, and Lovel the dog,
Rule all England under the hog."

Ratcliff, Catesby, and Lovel were the chief agents of the King's wicked schemes. On the royal escutcheon was a white boar.—
Curious Questions.

THE
American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

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Subscription \$2.00 per year; \$1.00 for six months—including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, November 18, 1897.

Natal Has "Acted."

Natal, an English province in Africa, has a "Dental Act," so we are informed by a correspondent in an English journal. Evidently, the most prominent and pleasing part of the "Act," to both the correspondent and the publisher, is that "Americans are excluded for the future."

We care nothing at all about what Natal has done, nor what any other English province may "Act"; but we would like to hand out a nut for some Briton to crack. In the first place, the exclusion of American dentists from English territory is not because American dentists are not competent as teachers, which we will show a little further on, but because America leads the world in dentistry, and because American dentists are the best in the world—Europe, Asia and Africa combined. We do not presume every American dentist to be a competent dentist, and neither do we presume every

English dentist to be competent; but the "Act" makes no discrimination, and debars all alike.

Now for the nut to be cracked, and to show that American dentists are teachers to English dentists. The issue of the journal that heralded the announcement of said "Act," with apparent glee, contained forty-eight articles—long and short; twenty-five of the forty-eight were written by American dentists.

They do well to fill their journals with good matter, but to do this they must import largely American talent. Now, if American dentists stand as teachers to English dentists, why can't American dentists practice in English territory?

A New Function of the Antrum.

In the text books we have been taught that the antrum has two functions, namely: the lubrication of the nasal passages, and imparting warmth to the air as it passes into the lungs.

These so-called functions have seemed to us as extremely absurd. In the first place, the Schneiderian membrane is fully capable of supplying the necessary moisture to the nares; and in the second instance, the "crow-quill size" of the middle meatus is totally inadequate to afford much, if any, warmth to the large volume of air constantly passing its orifice. We have long entertained the belief that the antra were devoid of any *function* whatever, but in the divine plan were intended as an economizer of bone tissue; but above all, the better to minimize the consequences of fracture of the superior maxillæ.

A fall or blow upon the outer wall of the antrum rarely involves its posterior aspect or immediate articulating bones; but were the maxilla solid bone structure, a fracture of those bones would be attended with more serious results than any that have yet been recorded.

In support of this proposition we direct attention to the well-grounded theory respecting the function of the sutures of the *cranial* bones.

Not to discuss the subject further by seeking analogies, we note a beautiful theory recently advanced by Dr. Sudduth, in which we heartily concur.

Speaking of the "Antrum and Vocal Resonance," he declares that the air contained in these cavities vibrates in harmony with the tones produced by the vocal cords. That this vibration is most appreciable when the tones produced are full of melody, as in certain kinds of church music and negro melodies. That it is more prominent in singing than in speaking, unless a special declamatory effect is attempted. That there is a type of individual to which the successful vocalist and orator belongs, and which is indicated, among other things, by a considerable but harmonious development of the maxillary sinuses. That variation in the size and shape of the resonant cavities when present, undoubtedly affects their value as resonators.

J. A. C.

Floss Silk.

How often writers and speakers fail to mention floss silk as a means of dental prophylaxis. The tooth-brush is stressed, even to the number and shape of the rows of bristles; while the floss silk, which is far more important, is not mentioned, or if mentioned, only in a casual way.

Instructions at the chair are given in the use of the brush, which is well, but the silk should receive the same attention. Really, if one is to be neglected let it be the brush, which does not reach the seat of nine-tenths of the decayed places, no matter how faithfully and carefully it is used. Impress upon the patient the importance of keeping accumulations from between the teeth, where a large majority of the caries are found. We have been for years using the Corticelli embroidery silk, found at dry-

goods stores, on small spools of about two and one-half yards each, and which sell for one cent. We use this waxed, at the chair, and present a spool with instructions how to use, and to wax, to each new patient. So long and persistently have we urged this in our practice that patients say they feel uncomfortable if their teeth are not "cleaned between." Especially should patients for whom approximal fillings have been made be urged to keep them clean between. Tell them that teeth cannot be made better than they were before they decayed, and if the same conditions are allowed to exist after they are filled that existed before, decay will surely recur around the fillings.

With many, if the matter is shown in the light of dollars and cents, it is more impressive. But with most intelligent people there is a desire to keep their teeth clean, and they only need to be given the proper directions for doing so, and will do it gladly.

Influenza and the Maxillary Sinus.

Now that winter is coming on and with it will probably come influenza, it is proper to call attention to the fact that this disease in many instances affects the maxillary sinus, one or both. Sometimes it causes intense suffering, and will end in suppuration. Generally with the ending of the influenza the antral trouble ends, but not always. The symptom that brings the sufferer to the dentist is sore teeth. In one case we treated, the patient was in intense pain—completely incapacitated for his business. The treatment in this case was simple and immediately effective. The antrum was punctured with a small drill at about the canine fossa and syringed with tepid saline water. This is a simple operation, and for the relief it affords it should be resorted to unhesitatingly by the dental surgeon.

We have seen cases of chronic antral trouble that were undoubtedly caused by influenza.

Atlanta Odontological Society.

This society, formed a year or more ago, has resumed work. At a meeting held a few days since, many active members were present. Dr. Otis McDonald, President, in the chair.

The Essayist, Dr. R. B. Adair, read a paper on Amalgam, in which he emphasized the recognized qualities of amalgam, and deprecated some of its well-known disadvantages. As to whether amalgam was a chemical compound or a mechanical mixture he subscribed to the latter theory, entering into somewhat an extended argument in support of this position. He claimed that while the discoloration of amalgam was a serious objection to its use, yet, owing to its superior saving qualities in certain localities, it was best to sacrifice appearances for durability. The doctor advocated the filling of all teeth—posterior to the *first* bicuspid—with amalgam. The observance of this practice insuring the saving of more teeth and conserving the strength and time of the operator.

The disrepute in which amalgam was held by some, was largely due to the hasty and slovenly manner of its introduction. If the same preparation of cavities, and careful manipulation were observed as when gold is used, the essayist predicted results that would challenge the admiration and endorsement of even the most partisan gold man.

In the opinion of the doctor, Dr. Black's recent experiments had settled the question of shrinkage and expansion to a minimum by using an alloy composed of silver, 68.5; tin, 25.5; gold, 4; zinc 1, and bismuth 1. He says "this also retains its color, has good edge strength, and capable of resisting the crushing power in mastication, and is very plastic in manipulation."

To make a perfect filling, a full view of the cavity should be had, claiming that the sense of touch could not be relied upon; and as a proof of this, he exhibited two

glass tubes—one of which was filled with the eyes open, and one with the eyes closed; the latter showing marked imperfections as compared with the former under a magnifying power of five diameters.

Dr. Fred Johnson: The majority of failures in amalgam fillings is due more to imperfect work than to anything else. He uses small pieces and burnishes each piece to the wall thoroughly.

Dr. Brosius: Too large pieces should not be placed in a cavity. The first piece in a large cavity should be quite soft, and the successive pieces should be harder as the filling grows to completion, finishing with that which is quite hard. This makes a filling in which the mercury is more thoroughly diffused throughout the mass.

Dr. Rosser: In the first years of his practice considered that in proportion as he used amalgam the more harm he was doing his patients. Now he is sure his patients would have been better served if he had used more amalgam. Cavities for amalgam should be prepared with as much care as if gold were to be used. Lack of carefulness in detail is the cause of many failures. Each filling should be finished at a second setting. Be careful about overlapping edges. Any good amalgam has edge strength to spare. Cement should be so used as a base in all large cavities. If two approximate fillings are to be made, put in one at a time and finish it before filling the other.

Dr. Jewett: Get it out of the patient's mind that because you are using amalgam it must be a cheap filling. Show them that it requires skill and judgment to make a good amalgam filling. The cheap-john idea is what does the damage in many instances. Amalgam is a chemical compound. All metals will not form an amalgam, as some have no affinity for mercury. It is not an oxide that forms on it, but a sulphid, and that blackens it.

Dr. Chappel: I am an advocate of amalgam, but care must be taken in both

the preparation of the cavity and the introduction of the filling. The rotary motion for packing is not so good as the direct pressure.

Dr. Frank Smith: Amalgam has been a puzzle to me. I practiced ten years before using it. Too much of it is used. The best results are to be had by using it as a veneer over cement or tin foil. Fill a cavity nearly full with tin and finish with amalgam, which gives a harder surface than tin alone.

Dr. Browne uses a matrix of mica, which is left in till the final finish.

Dr. W. E. Walker: The matrix of Dr. Browne will not do. Too much overhanging amalgam will be left to be finished off. It is more difficult to finish amalgam at the cervical margin than gold. The best matrix is made of German silver bent to the contour and adapted well at the cervix. Two wedges, one from labial and one from the inner side can be pressed in to hold the matrix tight against the wall. The double wedges can be easily removed.

Porcelain Inlay.

One of the great difficulties in the success of an inlay is encountered in matching the color, particularly when it is extensive, covering one-half or three-fourths of the width of the tooth. When a rod or piece of porcelain has been selected, which seems exactly the shade, after being fitted it will very often be found to be more imperfect in color than it promised.

Another complication often arises from the fact that the tooth structure around the cavity is not one color, sometimes darker near the gingival border, either on account of the shadow of the gums or discolored dentin, and occasionally, broken down near the approximal surface, there may be a shadow of a filling which would affect the color of the tooth.

The lack of uniformity in color might not disfigure a natural tooth so much, but

when an inlay is put in, the effect becomes more pronounced. All who have tried inlaying will quickly recognize this fact.

When an inlay is too light, which is generally the case, it can be shaded darker by coloring the bottom or reverse side. These inlays are not exactly transparent but generally are thin enough to make it possible to modify the color in the manner described.

After the inlay has been fitted and ground so as to be nearly as thin as it must be, after the final polish, try it in, and any defects in the color may be corrected or modified by coloring the bottom or reverse side with water-colors or some suitable coloring matter. As soon as it becomes dry, try it in again, and if not correct modify it until the exact shade is obtained.

It frequently occurs that in order to get a good effect one part of the inlay must be a shade darker or lighter than the other.

V. E. T.

A Dental Damnable.

A writer in the *Stomatological Gazette* gives the following as a fair sample of the quackery that prevails in San Francisco, and which he terms "Damnable." We trust the "Milpitas" will stay on the other Pacific Slope. The dental parlors in this section have not ascended yet, but have descended very deep.

"BALLOON ASCENSION!"

The Milpitas Dental Parlors will send up from their new offices, 28 West San Fernando street, at 12 o'clock Saturday, April 30th, three balloons, to one of which will be attached a voucher good for \$10 in dental work for finder upon return. From 10 A. M. to 12 M. same day, the Milpitas dentists will, to demonstrate their method of painless dentistry, extract teeth free of charge. This is an opportunity not to be missed."

We commend the above to some of the pets of the *Dominion Dental Journal*.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., NOVEMBER 25, 1897.

NO. 11

A PLEA FOR CONSERVATISM IN DENTAL PRACTICE.

BY J. A. CHAPPLE, D.D.S.,
Atlanta, Ga.

To assert a proposition, unsupported by facts and incapable of demonstration, is, perhaps, one of the most conspicuous faults to be found in the profession to-day. This was preeminently true fifteen or twenty years ago more than it is at the present moment; but a sufficient amount of dogmatism yet remains to strongly tincture the current literature and practice of the day.

In the early ages of the world, when human knowledge was necessarily limited, false teachers and dogmatists naturally abounded and luxuriated through the ignorance of the many, but in this boasted nineteenth century the individual who "arrogates to himself a sole exclusive knowledge," and endeavors to disseminate it with prodigal liberality, poses before the world an object of sincere commiseration, rather than one deserving of censure and ridicule; for he belongs to that class usually denominated in common parlance—a crank!

An illustration of this character of person is found in the printed proceedings of the dental societies throughout the country, when he asserts unqualifiedly and with much emphasis that he caps every exposed pulp, and saves 95 per cent. of them by a method peculiarly his *own*, and one absolutely infallible. We know there is as much truth in this statement as in the advertisements of

quacks, who claim to cure all chronic diseases where others have failed.

No less a conspicuous object of commiseration is the man who lays claim to a certain line of treatment whereby *he* effects a *permanent* cure of pyorrhea.

When J. Foster Flagg promulgated his ideas and mode of practice several years ago with regard to plastic fillings, and urged the proposition that a certain class of teeth could be saved with amalgam that could not with gold, leading men from Maine to California rushed into print and endeavored to excel each other in their denunciation of Flagg's statement, and boldly assumed the contrary of his proposition. The late lamented and brilliant Atkinson was, perhaps, Flagg's most violent opponent in the controversy, and claimed that any tooth that could be saved with amalgam could be equally as well saved with gold. But it is the wise conservative man who can and does change his opinions, and Atkinson was an example of this old apothegm, for we hear him in later years paying a deserved tribute to the saving qualities of this once almost rejected and despised corner-stone of the dental structure.

All remember how Herbst electrified—not to say hypnotized (?) the dental luminaries of America by his methods of filling teeth. Many agreed that this "star from the east" had arisen, phoenix-like, from the ashes and debris of European dentistry, and established a standard and method of practice at once invincible and one destined to supplant the popular practice which had

been in vogue on these shores for the last thirty and fifty years. The manufacturers were literally overwhelmed with orders for the Herbst pluggers. The clinician was abroad in the land, proclaiming and demonstrating (?) the par excellence of the Herbst idea. And should any venture so bold as to take issue with and question the champion of the eastern star, he was at once denounced as a carbuncle on the body-politic—an obstructionist to progress—and an old fossil worthy of a place only in the British Museum of Antiquities. But how is it today? Where are the Herbst missionaries and their delicate burnishers? With doubtless one notable exception, Bcdecker, it would require a search-warrant to find the former; and as for the latter, the word “dogmatism” can easily be traced in the dust that covers them from shank to point. Dr. Sam Johnson said, “Never be the first to adopt a new fashion, nor the last to leave off an old one.” This was a plea for conservatism in dress, but is none the less applicable to us as practitioners.

How many are there in the profession today whose pharmacopœia only contains three articles, namely, creosote, carbolic acid and arsenic, and who regard the introduction of new preparations, and even old ones, with suspicion, declaring that any and all diseases that come under the attention of the dentist can, in most cases, be cured with either of the above named articles? If Blackstone had enunciated but three or four principles in law, and upon these principles had labored to build his present popular text-books, what would be the status of the legal profession, to say nothing of the disordered condition of things and society?

In the practice of medicine the successful practitioner is the man who, in treating typhoid fever, for instance, relies upon no one agent as a specific, but is governed largely by the conditions and environments of his patient. He knows from observation and experience that where one particular

agent and mode of treatment will act like a charm and effect a cure, the same agent and mode of treatment will have an opposite effect upon others.

The dentist who is content to pursue one line of practice, rigidly ignoring all other methods, will, sooner or later, come to grief and disaster, and the work of a lifetime will loom up before him as a monument to his intolerance and egotism.

If we have been pursuing a certain stereotyped practice in the belief that it is the only one by which we can attain success, save your criticism for your next door neighbor if, in his honesty of belief, he should see proper to observe quite a different line of practice, and whose results are equally as satisfactory as your own.

If Drs. Flagg and Cowles are partial to plastics for filling teeth, and who show, as a result of over thirty years' practice, an almost unbroken record of brilliant achievements in this line, where is the Sir Oracle bold enough to make war upon such a conservative mode of practice?

As I said in the outset, a far more tolerant spirit is manifest throughout the “rank and file” of the profession than obtained some twenty years ago. These are signs for genuine congratulation and encouragement. Let us extend a willing hand and ear to the conservative dentist. Let us renounce, for the moment at least, our pet plans, and emulate the plans of others, for we may find some good in them worthy of our emulation.

Let us help enlarge our dental materia medica and add to our meager stock of dental filling material, for I believe the *ideal* filling material is yet to be discovered; and ever and anon strive for and maintain the right of exclusive practice in oral surgery.

When we will have attained unto higher excellence by reason of professional tolerance and conservatism, we need not knock at the door of medicine for recognition, but medicine will be found meeting us more than half way, extending the olive branch of peace and the “right hand of fellowship.”

THE ARTISAN OR THE ARTIST, WHICH ?

No one will deny that from the introduction of vulcanite up to the advent of gold crowns and bridge-work, the profession was on the retrograde. But now that the noblest of all the metals has returned to the laboratory, the—but since Dr. E. J. Perry, in the *Dental Review*, has covered the subject so thoroughly, we shall let him tell the story. His entire article should be read by every dentist in our wide domain, but our limited space will only admit of a few choice paragraphs. He says, "When your essayist began to study dentistry, the metals gold, silver and platinum were just packing their trunks in disgust and preparing to leave the laboratory. I was introduced in the most formal way, and away they went. Vulcanite had run them out where, for long years, they had held full sway. My preceptor served four years' apprenticeship in the laboratory alone. I served one year, then went to college. What did I find in the laboratory there? Vulcanite was supreme. Gold and silver and platinum had gone, and no one was left to speak of their good qualities. Their biographies were read, that was all. Where was the unfortunate individual with the edentulous jaws? He was steered up against Mr. Vulcanite. His predecessors in trouble had been taught by the former knights of the laboratory to pay handsomely for services rendered. Hence it was easy to get a big price for vulcanite, and the work quickly done. Then came in the Barbarians and the Philistines, and competition ran down the price. The best men went into the operating-room and the breach between the two widened. This was the state of affairs up to the advent of modern crown and bridge-work. Now the future looks bright. The metals with their bright faces have forced terms with the despot vulcanite, and the operator, however high his dignity, can sometimes be found in the lab-

oratory, and to my optimistic vision the possibilities of prosthetic dental art are indeed ranging into the realm of real probabilities. Much is to be done. Line upon line and precept upon precept are to be written. We must begin in the societies and colleges.

Ability of a high order is coming into the laboratory, the electric furnace, electric lathe, the various methods of making crowns and bridges and dentures, and the fascination of the dental ceramic art are forcing up the standard of prosthetic work. Crown and bridge-work have lifted into the free air and pure sunshine the banner of prosthetic dental art. It has washed up the benches and cleaned up the laboratory, so that its dingy walls and disgusting filth are no longer its distinctive features. But instead, the laboratory is neat and clean, artistic and convenient in arrangement, and altogether in a first-class office the most fascinating place in which to work. The metals have done this. Ceramics are now, and are in the future, to cut a large figure in dental practice. They exact of its servants neatness and methodical precision. Crown-work of any sort exacts of the dentist not alone mechanical excellence, but artistic conception, ingenious and creative skill, esthetic tastes, and the discriminating power of application. The importance of prosthetic dental art to humanity is forcing itself into the heart and mind of the profession. Not the artisan, but the artist, the doctor, the dentist, who combines in one brain-case all these in one. He is thinking, and the aforesaid unfortunate person with toothless and expressionless face is being steered up against a very different proposition. Doubtless the almighty dollar has a finger in this pie, and is an important factor in the case; but no matter, the results are the same, and the credit is not discounted. I say to you, if perchance you are here, you who extract aching or devitalized teeth, you who recommend rubber as the best base for artificial

teeth, or you lily-fingered operators who never do any plate work, who do not go into the laboratory except to smoke or black your boots, who have laboratories only for the storage of filth, soiled towels, cast off clothes and broken furniture; I say to you, whoever you are or where, look to your laurels; the new day has dawned; the triumphal car is coming; an exacting public will disown you, and if you should fall you will be trampled on, and you cannot see the procession for dust. Go from this meeting, ye who fall under this description, and clean up your dark and filthy laboratories; put in neat appliances and modern apparatus; get in line of progress; make your own crowns and bridges; get hold of porcelain; catch on to ceramics; stop putting in those ready-made, hand-me-down crowns; get some works on metallurgy and ceramics; give not the hours after you have done a day's work in the operating-room, but of your best time and best thought; begin by urging those who can pay to have continuous gum or gold work, and their number will grow."

Something About Plaster.

When plaster has set and becomes dry, it is full of air by reason of the porosity of the crystallized mass. If newly mixed plaster is poured on to it in this state it will quickly absorb the water from the latter, which expels the air, which, in turn, forces its way into the soft plaster, resulting in an imperfect cast.

Plaster should never be poured on to plaster without first having thoroughly soaked the first piece in water. D. D. A.

A Fading Beauty's Departing Charm.

Thy teeth, like memorial stones,
Mark the place of mouldering bones;
Thy lips enfold no pearly shrine,
To tempt the God of Love divine.

WM. H. RICHARDS.

SCIENCE OPPOSED TO AVARICE.

"Good morning, Doctor."

"Good morning, Mr. Allcash."

"I called in to see if you could make me some teeth. I need a plate; my front teeth are all gone."

"Well, have a seat and let's make an examination. Yes, your front teeth are in a bad way. Here is one central incisor entirely lost, the other and a lateral incisor broken off, but with solid roots left. You do not need a plate, Mr. Allcash; have you not heard of bridge-work?"

"No. What is that?"

"It is a piece of gold work extending from one root to the other, fastened to each by means of a pin extending some distance into it, is strong, durable, cleanly, occupies only the space required for the original teeth, and, to all purposes, is a perfect substitute."

"But what will be the cost of such work?"

"Only about forty-five dollars."

"What will a rubber plate cost?"

"Say ten dollars, including the extraction of the roots."

"Well, then, give me the plate every time."

O, my brother, what are you going to do? This dialogue has brought us to the point at issue, to the thought which suggested this brief article. You recognize in it a conversation which at times occurs in your own office.

Are you going to extract the roots because he demands it? Are you going to yield to his demands rather than see him go to some other place to have the same work done? Are you willing to prostitute the most sacred precepts of dental science and the most lofty conceptions of eternal truth to the greed of avarice? If you do, you commit a sin before high heaven, and give a slap in the face to whatever of dignity you may possess as a dentist.

You have no more right to do it than a surgeon would have to cut the fingers from your right hand for a consideration.

In this day an anterior tooth with the crown lost but a solid root left, is no more a lost tooth, and is no more to be extracted than the same tooth would be without any cavity in it but with a dead pulp. It is not our mission to destroy the dental organs.

Several years ago when we met in a Georgia city in convention of that grandest of all organizations, the old Georgia State Dental Society, we were greeted the first morning by these flying headlines in the local paper: **THE TOOTH-PULLERS ARE HERE!** The good people of the city, with that hospitality characteristic of Georgians but with much trepidation, extended us a welcome, to which it was my pleasure to respond. I told them that that was all a mistake, we had not come to pull their teeth but to discuss dental subjects in a scientific way. It was our mission to save teeth, not to destroy them. From that time on we were received as truly welcome guests.

The term dentist is derived from the Latin *dens*—a tooth, which means that dentist stands for teeth and not for their destruction. It is true that bridge-work has been vastly abused, and Brother Catching wants to amend the penal laws so as to send the fellow to the penitentiary who would put a gold crown on a front tooth, but placed with discretion there is no dental substitute which approaches nearer the ideal than does bridge-work.

D. D. A.

Dentin Obtundent.

Potassium carbonate, glycerine, cocain and carbolic acid in a saturated solution, Dr. Payne says, in the *Stomatological Gazette*, will anesthetize the sensitive dentin in a great many cases. The cavity is dried with alcohol, a drop of the obtundent is placed in the cavity, and a continuous blast of hot air is thrown on it for five minutes.

DENTAL PRACTICE IN ARMY AND PRISON DURING THE LATE WAR.

Being detailed as Secretary to Brigadier-General Scales, and having some leisure, I established a Dental Department to the Army of Northern Virginia, and obtained a detail by the Secretary of War at Richmond for that purpose. Soft goldfoil without annealing was used exclusively as a filling material, and large numbers of patients were served and many teeth filled successfully, notwithstanding the many difficulties incident to camp life. A vivid recollection of one afternoon before Richmond, when we were busily engaged filling teeth, was suddenly driven from camp by *severe shelling* by the enemy. Shells fell thick and fast, which compelled us to forego our dental operations "and git," but that did not deter us from resuming our work when the active campaign during the summer was over. The long winter was spent in active practice.

Our charges for gold fillings were from \$20 to \$60. Gold foil cost \$60 per ounce.

I carried a set of forceps during the active campaign to relieve many battle-scarred veterans on the march, of torturing toothache.

On one occasion a poor soldier presented himself before my tent during the dead hours of night, with a huge torch, to have an offending molar extracted, after which, when lo and behold I discovered I extracted the wrong tooth and came near receiving a drubbing by the fellow. We replanted the tooth—after we extracted the right one. The poor fellow felt so much relief after the tooth became solid, that he declared he would have all his teeth extracted and replanted.

My experience as dentist to the camp of Confederate Prisoners at Point Lookout, Md., just after Lee's surrender, was something remarkable. 22,000 prisoners ex-

posed offered more experience in extracting and cleaning than your humble servant relished.

After a lapse of thirty-five years I find some soft gold fillings remaining as mementoes of the late war.

Yours fraternally,

W. H. HOFFMAN, D.D.S.

Will any one else give us data about dental practice in the army and navy during the late war?—ED. AMERICAN DENTAL WEEKLY.

TINKERING WITH CONTINUOUS GUM.

While continuous gum work remains the only perfect denture after fifty years' experience, says Dr. Haskell in the *Ohio Dental Journal*, yet from time to time some one feels called upon to tinker with it with the expectation of improving it or cheapening its cost, and which in every instance proves a failure. The writer continuing says:

Many attempts have been made to produce low fusing materials, but these have proved futile, because a low fusing material is not the best for either artistic or permanent results.

The latest attempt in this line appears in a circular in which the writer, whose portrait adorns it, tells of his wonderful discovery, whereby this style of work, which heretofore has mostly been confined to a few dentists who were thought to possess some particular patience or skill adapted for this kind of work, was no longer necessary, but by the adoption of the "Low Fusing Porcelain," 38-gauge platinum could be used without fear of warping, much easier to swage and manipulate and with less expense, using a porcelain which fuses four hundred degrees lower than any other on the market. This he claims is the result of "long experience."

Fifty years ago John Allen began experimenting with low fusing materials, and after several years' experimenting, finally

succeeded, with the aid of L. L. Close, in perfecting materials for this work. I commenced the use of it forty-six years ago and would not give a penny to have it changed in any particular.

There is one thing which must be remembered, and which some dentists do not seem to comprehend, viz.: That the strength of this work is *in the metal*. The porcelain adds to it, but the foundation must be strong—nothing less than 28-gauge plate, reinforced at the heel, a flat wire around the margin, and continuous backing, with foot-piece resting on and soldered to the plate. I have made it a point to make the work as strong as possible, regardless of expense, and have been rewarded by securing the most durable work put in the mouth, lasting from twenty to forty years.

I can assure the profession that a tissue-paper plate (38-gauge) covered with the "lowest fusing" material in use, practically glass, is a poor substitute for continuous gum work—a mere cockle-shell. Such a structure will not sustain the strain very long in many mouths when it is subjected to strain. Glass will sustain great pressure in a tooth but not the strain it is subjected to when spread thin over the surface of any plate, and especially of platinum so fearfully thin. Then when it comes to mending, there will be entertainment.

As to weight, I do not consider it a factor in the insertion of an upper denture. Patients do not complain of it, and never had to replace it with other work on account of weight.

No, do not destroy the integrity of this beautiful work by the use of such methods, for there is nothing so well rewards the thorough, careful and conscientious worker as the proper construction of continuous gum work.

The AMERICAN DENTAL WEEKLY is O. K. Just the thing. The copies received already are worth a year's subscription.

H. A. SMITH.

Paris, Ky.

CORRESPONDENCE.

Editor American Dental Weekly:

Reading the article in the AMERICAN DENTAL WEEKLY, "The Highest Aim," by Dr. E. P. Beadles, one finds these words: "The difference between a tradesman and the really professional man is that the former makes the dollar his highest aim, while the latter makes the services he can render to humanity his highest aim."

Later he says: "The tradesman nor the professional advertising writer can not understand these things."

Later: "We have had to depend heretofore largely on the tradesman for our literature. In time there will be professional literature and trade literature; we will be able to separate the two, and the sooner this desire is accomplished, the better it will be for the purely professional. The trade is a necessity, and the tradesmen are gentlemen, but it can not be expected that they should see the matter from a professional standpoint."

Why not?

"Nor can it be expected that they would refuse to print advertisements that tend to the leading astray of the unwary."

Why not?

The article is so fairly written, its tone so kindly, its purpose so pure, the standing of the writer so high, that no one can fail to admire and applaud the effort even while taking issue as to the premises.

The basis of ethics is the "Golden Rule." The clearest exegesis is the "Sermon on the Mount," the brightest exemplar the preacher of that wonderful production. Where do we find in that sermon that any classes are excluded from its obligations or denied its privileges? The lawyer, the doctor, the soldier, the farmer, the mechanic, or the tradesman are alike bound by the obligations and entitled to its rewards.

It is our duty, no matter what our calling, to obey its injunctions. There are no

exemptions, nor any favored classes; its maxims are clear and plain; a tradesman or laborer can understand them; a "wayfaring man, though a fool, need not err therein."

Dr. Beadles has simply voiced a sentiment that has obtained almost universally with the learned profession. The sentiment, we think, is all wrong. Obligations to higher aims are as binding on one class as on another, and the disregard of the "Golden Rule" is as common among the privileged classes (so-called) as elsewhere.

"He that is true is true just as he is true" and no more. Many gentlemen of the profession accept the privileges, but overlook the obligations.

Dr. Beadles is right in showing them their sins, but let one inquire what is trade literature and professional literature? Are we not groping along in the dark? Literature is a commodity to be bought and sold—rightly so. The idea that one dentist should not pay for what he gets from another, is all very well for the lazy or sleepy drone. Business is business, and the truly ethical, just man, desires to pay for what he gets.

The higher the type of literary work the more it is worth. All men value more highly what they pay for in dollars or hard work.

These thoughts are thrown out to elicit inquiry, not to provoke discussion.

N. S. Y.

Borrowed a Plate.

This case came directly under my observation and is true. Two sisters had lost the central incisors, one had two plates and the other one. The sister who had one plate lost it, when she borrowed her sister's extra one and wore it a long time with comfort.

D. D. A.

A mother ten years and two months old, with a plump, healthy baby, is reported by the *American Journal of Surgery and Gynecology* as the youngest yet heard from.

Some Kind Expressions for the Weekly.

Find enclosed money for the sprightly WEEKLY, which I read with great pleasure and profit. W. W. H. THACKSTON,

Farmville, Va.

The WEEKLY is just the thing.

J. A. FRAZIER, Marion, Ala.

It is charming and fully up to date.

T. T. MOORE, Columbia, S. C.

I congratulate the profession on the advent of the WEEKLY—a rapid means of communication. W. T. ARRINGTON,

Memphis, Tenn.

It's the paper that I have been looking for. S. S. SHACKELFORD, Austin, Tex.

We can't afford to give more space, this time, for the good things said about the AMERICAN DENTAL WEEKLY.

GOSHEN, IND., Nov. 10, '97.

Editor American Dental Weekly:

Observing in the WEEKLY a query as to the meaning of "bealing," I looked up an old Johnson's dictionary, and find that "beal" is "a whelk or pimple"; "to beal" is "to ripen; to gather matter, or come to a head." So it appears that this is an old English word derived from the Italian "bolla," and not an American localism.

Fraternally, J. H. HUGHES, D.D.S.

Drawing Lessons.

A young lady artist to her dentist, who had just completed her dental operations, with the exception of extracting a third molar:

She. "Doctor, I have given you a large amount of work, you ought to let me give you drawing-lessons to help pay my bill."

Doctor. "I'll think about it. Open your mouth a little wider." (Extracts tooth and exhibits it in the jaws of the forceps.) "And you think I need to take lessons in drawing?"

She. "No, indeed—I beg pardon."

HAMILTON V. HORTON, D.D.S.
WINSTON, N. C.

President of the North Carolina Dental Association.

Dr. Horton was born in the old Moravian town of Salem, N. C., July 20th, 1864, son of Capt. A. H. Horton and M. J. Horton nee Vogles. Educational advantages were the best in his State. Studied dentistry at the University of Maryland; graduated in the class of 1886-87, and was president of the same. He also obtained the James H. Harris medal as best gold operator. Located in Winston, N. C., sister city to the place of his birth, better known now as the Twin City (Winston-Salem). Was elected vice-president of the North Carolina Dental Association in 1889; was chosen as essayist in 1895; was elected president of the North Carolina Dental Association which met in Charlotte May, 1897, which position he now holds.

The average increase of suicides for the last five years in the United States has been seven hundred and ninety.

THE
American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription \$2.00 per year; \$1.00 for six months—including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, November 25, 1897.

Only a Suggestion.

Our modest friend, Dr. T. W. Brophy of Chicago, at the late horse show in that city, succeeded in carrying off several prizes on entry of fine stock. It is a positive relief to our stereotyped life to know that some of our confrères are not so much engaged or wedded to their professional cares as to preclude them from the enjoyment of even a good horse. And this leads us to observe that the dentist, with a reasonably large practice, should be interested in some out-door business or sport that would require at least two hours of his time every day. The benefits thus derived from a diversity of employment are so multitudinous, it would be a reflection upon your intelligence to enumerate them. If you care to keep the undertaker out of a job as long as possible, so far as you are personally concerned, get away from the odors of that den of yours, and go out and commune

with nature; inhale her flowers, the new-mown hay, or fresh turned earth; "plunge your fingers into the bright sunlight and hug in whole armfuls of intoxicating air."

J. A. C.

To Close for a Season.

In Buenos Ayres there is one physician to each thousand inhabitants. Medical students have increased to such an extent that there has been a movement started to close the medical schools for a period of five years so that the profession shall not be crowded. In the United States there is one physician to about every five hundred inhabitants, and with enough medical students to double the number of physicians during the next eight years. There is, however, no movement on foot to close the medical colleges, but there are several movements on foot to start new ones.

Setting Bridges.

Nitrate of silver is being employed in new channels, as will be noted in an extract from Dr. Alex. Jameson, in the *Dental Review*. He claims the idea as an original one. Having occasion to remove bridges on account of extreme thermal disturbance, he applies the dam on the abutments, or teeth, as the case may be, and coats them with nitrate of silver. This can be done by direct application or by cataphoresis. He says there are three points of advantage in his method:

1. If the tooth is a live one, the sensitive condition is obviated, especially if the cement is slightly acid in reaction.

2. An oxyphosphate cement will adhere to this surface more surely than to the tooth.

3. In case any cement washes away at any time, or in case a band does not cover the root entirely, the nitrate of silver coating protects it thoroughly.

Atlanta Odontological Society.

The bimonthly meeting was held at the office of Dr. W. G. Browne, Dr. O. H. McDonald presiding.

The essayist, Dr. C. V. Rosser, read a paper on the subject of "Soft Gold."

While he used more cohesive than soft, in his practice, he was doubtful of the results. As a tooth and time-saver his better judgment suggested the almost exclusive use of soft gold in all crown, fissure, labial and lingual cavities and cervical aspects of approximal cavities. He preferred cylinders to any other form, making his own as the exigencies of the case demanded. If the bottom of the cavity should be uneven, it should be made level with cement, claiming better results in a uniform density of filling. His method of manipulating soft gold did not differ from that of others, but gave preference to smooth-pointed pluggers slightly serrated.

To better illustrate, those cavities where soft gold was indicated, the doctor presented some excellent drawings prepared expressly for the occasion, and exhibited two specimens of soft gold fillings, now in perfect condition, that were made forty-two and fifty-seven years ago, respectively.

Dr. Browne: Too little attention has been given to soft gold in later years. He agreed with the essayist that, independent of the saving qualities of soft foil, the time saved to both patient and operator was a desideratum. He preferred semi-cohesive foil where the filling was to be finished with cohesive.

Dr. Adair is a soft gold man by reason of early training and from choice. Had claimed to some of his patients that he was the only dentist in Atlanta who could make a soft gold filling, but was now ready and willing to admit, from what he had seen and heard, that there were others who were equally as competent in this line as himself. Soft foil was more compatible in teeth that

were exquisitely sensitive. The ribbon form was preferable to cylinders, and but for the friability of his instruments, Herbst's method of introducing soft foil was decidedly the ideal one. During his stay in New York city was impressed with the fact that the class of dentists who held their clientage were the soft foil operators.

Dr. Foster filled nine-tenths of all cavities partially with soft foil, finishing with cohesive, and invariably used soft at cervical margins. With pellets he could do better work than with either the ribbon or cylinder form, having been taught their use by the great soft gold advocate, Dr. J. Y. Crawford. Called attention to Dr. Miller's statement that bacteria would not attack a cavity when filled with Abbey's soft foil, and reiterated the claims of some that this make of gold possessed rare therapeutic properties.

Others participated in the discussion, indorsing the position of Dr. Rosser.

As no one is bold enough to question the claims of soft gold, and since it has its host of distinguished champions, it is surprising how few, compared with the great army of dentists, use it to any extent for exclusively all soft gold fillings.

General Grant and Carcinoma.

In the course of a discussion of carcinoma, in the Odontographic Society of Chicago, as reported by the *Dental Review*, Dr. Brophy observed that it was possible that some of the gentlemen present may not have known that the disease which terminated the life of General Grant was of dental origin. General Grant was a patient of Dr. Frank Abbott of New York, and it was from Dr. Abbott's lips that he learned the story more fully and accurately than was ever published of that distinguished soldier's last sickness. He was a man who had no fear of pain, who had passed through many battles, and had been subjected to the injuries and hardships of cam-

paigna. He paid no attention to the slight irritation at the base of the tongue, caused by a broken molar tooth. He continued to smoke; the tooth continued to irritate the parts, lacerating the surface, and by and by the tissue began to develop new cancer cells, and almost simultaneously with the development of new cells was a breaking down and a development of a characteristic epithelial growth. The diseased process began to extend down into the pharynx, involved the lymphatic glands, and when it reached a point that made it almost impossible for him to tolerate the pain he applied for relief, but it was too late.

It is a noteworthy fact that within a few years of each other, three statesmen of world-wide distinction should have died from the same disease, all resulting from dental irritation. We refer to General Grant, Emperor Frederick of Germany, and Hon. Benj. H. Hill.

The Microscope and Amalgam.

Since Dr. Black, by his recent experiments, exploded so many theories respecting amalgam, he has the profession on the run. Discussing this old, but ever-living subject, in the Chicago Dental Society, Dr. J. N. Crouse said he had recently begun to use the microscope, which was a very valuable thing, for it had taken the conceit out of him. When Dr. Black published the results of his experiments, he regretted that he was not able to make a perfect amalgam filling in a steel tube. He said: "He, (Dr. Black) was talking through his hat." But found he was right. He made the proposition that no one can fill a steel tube with the ordinary amalgam and make a perfect filling. Why? Because until it gets hard enough it will move in applying pressure on one portion, and if you examine it under the microscope you will see that it shifts around like a ball; it does not pack to place, but shifts in its position. He talked to Dr. Black about it and reminded

him of what he had said a year or so ago. Until recently he was skeptical about amalgam, and so was a somewhat radical gold-filler, and he had served his patients better with it than he could have with any other material. Furthermore he was a better practitioner for having done so, because a man who fills teeth steadily with gold must be thorough if he makes a success of it. With amalgam it is hard to tell whether you make a success or not, for out of sixty odd specimens of amalgam on the market, it has been found by demonstration that there is not one which does not shrink more or less; many of them shrinking enough to drop out of the tube in twenty-four hours."

If the test in a steel tube is unsatisfactory, would not a glass tube be equally so?

Scurvy.

The *Maryland Medical Journal* gives the following from a paper by Dr. Cooke, of Baltimore, who reported five cases:

After giving an historical sketch of this disease, showing how it has gradually been eliminated from our merchant marine, the paper refers to its more frequent discovery in infants, and related three cases in the writer's private practice during the past year, where the symptoms of scurvy were such that no doubt could exist as to its diagnosis. Undoubtedly, previously the writer had cases diagnosed otherwise than scurvy, dentition in infants often hiding the symptoms of scurvy. The symptoms of scurvy in these three cases were a swelling in the lower extremities, painless, except one case, petechial ecchymosis on lower extremities, hematuria, hemic murmur at base; the red, spongy fungous appearance of gums, and finally the most important diagnostic symptom was the fact that antiscorbutic treatment cured where other treatment had failed. Artificially prepared foods are the causes of scurvy in infants. The two cases in adults occurred among the prisoners confined in Maryland penitentiary.

In one, a female, the symptoms were first rise of temperature, which lasted a few days, then subsided. The appearance of large, subcutaneous areas of ecchymosis, epistaxis and neuralgia. Retinal hemorrhage, knee swelled up and very painful from being stuck with a needle and showed spongy and fungous appearance of the gums behind the upper incisors. In the other cases, a male, the gum symptoms appeared first, the teeth becoming loose, gums fungous, red and swollen. Bruises without cause, feet becoming sore so he could not stand to work, etc. Osteitis deformans of Paget was a complication.

In the adult cases it was noted that, though the institution furnished the green vegetables to the inmates, those prisoners did not like the diet as supplied, and subsisted on bread and water, thus contracting the disease. On insisting on a green vegetable diet along with antiscorbutic treatment, symptoms quickly disappeared.

Reading-matter for Office Table.

It is absolutely essential for a dental office to have entertaining reading-matter on the table, for the pleasure and entertainment of those waiting in the room. There is no publication more acceptable to the public than the American monthly, *Review of Reviews*.

Eleven Weeks Old.

The AMERICAN DENTAL WEEKLY is eleven weeks old to-day, and is a "mighty peart" youngster. Dentists appreciate getting the news early and getting it fifty-two times a year.

Impure Vaccine Virus.

Two places in Chambersburg, Penn., says Dr. Pitfield, in *Medical and Surgical Reporter*, send forth vaccine virus which is no more than pus containing deadly germs of tetanus and other diseases. He says arm-swelling, erysipelas and other troubles arise from such virus.

Payne's Local Anesthetic.

The following formula for a local anesthetic was formulated by Dr. Clyde Payne, of San Francisco, a year or more ago, and given to his associates but withheld from the public until recently, when it appeared in the *Stomatological Gazette*. It has been pronounced valuable and will now be added to the already long list of such prescriptions.

He uses the following formula, in which the ingredients are so proportioned that he has yet to have an ill-physiological effect from cocain. The formula is as follows:

R Cocain.....	15 grains.
Glycerin.....	5 drams.
Nitroglycerin.....	1/10 grain.
Morphin sulph.....	1 grain.
Atrophia sulph.....	1 grain.
Distilled water q. s. to make	2 ounces.

M. Sig.—Use hypodermically for extraction of teeth.

Analyzed the formula is as follows:

There is sufficient glycerine to localize the cocain, holding it in position to the parts a sufficient length of time to complete the operation, and not too long so that it acts as an irritant and causes a swelling. In patients who have poor circulation sometimes there is a swelling with this formula, but it will be painless and will subside as soon as the anesthetic, with which you have infiltrated the tissues, has become absorbed. The nitroglycerine stimulates the heart just in proportion as the cocain may depress it. The sulphates of morphia and atrophina overcome the after-pain. The carbolic acid keeps the solution.

An Emergency Impression Cup.

To make a good impression cup for a crown or small bridge, Dr. W. A. Blassingame takes an ordinary tin teaspoon, which can be had for a few cents apiece, bends up the edges with a pair of pliers, and gets a cup that answers every purpose.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., DECEMBER 2, 1897.

NO. 12.

PATENTS AND ETHICS.

So much has been said and written in late years derogatory of patents as applied to dental appliances, one is inclined to drift with the current of popular opinion and add their mite to indiscriminate denunciation. It is possible this prejudice had its inception during the reign of the Goodyear Vulcanite patent, an octopus whose cormorant greed was indeed severely felt by the profession.

But we are not disposed to visit the sins of the Goodyear patent upon those now in the market. On the contrary, a casual reflection upon the subject has forced the conclusion that the patent laws have contributed more to the benefits of the profession than all other forces combined.

When we affirm this proposition we must not be understood as indorsing patents as applied to certain methods or modes of practice, but to appliances only.

Now and then the public becomes the beneficiary of some genius who is satisfied with the compensation which accrues to him in the form of public indorsement.

But it is the hope of material reward which has been the main incentive to at least ninety-nine one-hundredths of our most valuable inventions. The introduction of the engine, electric and mechanical mallets, has made it possible to accomplish more in a given time and with corresponding remuneration. No one will attempt to controvert this proposition, or charge the patentees as mercenary or unethical. And if they are now living in the enjoyment of

their well-earned reward, where is the man who would pluck one iota from their achievements or one cent from their exchequer?

Every one admits the great value of the dam; and if an inventor was ever justified in claiming a patent, Barnum was pre-eminently that man. But doubtless sensitive to the criticism of the so-called ethical class, he gave this almost incalculable boon to the profession, receiving as his final reward the expense of a burial at the hands of his beneficiaries! The fact must not be lost sight of, that while the principal patentees of dental appliances added to their own bank accounts, they also contributed at the same time to the *arts* of dentistry and to your bank account as well.

Improved instruments, of necessity, bring about new methods, and these in turn have enabled the operator to charge a fee corresponding to his outlay of money and mental effort.

An office minus all modern appliances is soon shunned by the public, and justly regarded with suspicion. The intelligent patient expects to find you equipped with the latest adjuncts to your business, and is willing to pay for the benefits therefrom.

And now that we are discussing a very practical question, the natural query arises, Who pays for these patented appliances? We answer, the dear public.

It is useless to try to conceal the impression which prevails throughout the profession, that the manufacturers are the largest gainers of patented appliances, and that

the dentist alone is the principal contributor. We are not in the confidence of the manufacturers, nor are we posing as their champion defender, but as we remarked in the beginning of this article, we have given this matter some investigation, and the truth demands that we "render unto Caesar the things that are Caesar's."

The uncertainty of the value of, and usually high price asked for a patented article deters the manufacturer from exclusive ownership. The patentee must assume some risk, and he does this upon the basis of a percentage, or what is commonly known as a royalty, the manufacturer realizing a reasonable profit upon the article made. When the demand for the article proves exceptionally great, as a matter of course, the manufacturer reaps a corresponding benefit *but so does the purchaser.*

As will be readily seen, we have made no attempt at elaborate argument to sustain our position, but simply touched upon those points which naturally suggests themselves.

In conclusion, we have no doubt but what this artificial sentiment regarding dental patents has deterred many from entering the inviting and fascinating field of invention. Considering the rapid strides made in dentistry by reason of improved appliances, the profession can well afford to modify its attitude toward patents, and instead of indiscriminate condemnation, should encourage and foster the genius whose ambition and necessities may yet evolve the crowning glory of dental art!

J. A. CHAPPLE.

One of the Chicago hotels lets the "privilege" of a resident physician for \$500 a year. The bootblack and the cigar vendor also enjoy "privileges." There should be an opening for a dentist.

A store in the same city has an apartment devoted to dentistry. An enterprising woman bought the privilege, and hires third-class operators. It's a kind of get-your-teeth-fixed-while-you-wait place.

THROW THEM AWAY!

For the good they *may* have done, let them live only in your memory. But for the future have nothing more to do with them. Because they were special friends of our forefathers and were called into service in every emergency, there is no good reason why we should continue to rely upon their very doubtful efficiency. For in the light of recent experiments, to say nothing of other objectionable features, as antiseptics, they are greatly discounted by a host of preparations.

In denouncing creosote and carbolic acid as unworthy of continued confidence, we are fully aware of the avalanche of invectives which we thus invite.

Since pathological lesions in the mouth, almost without a single exception, demand strictly antiseptic treatment; and since it has been shown by analysis that these two popular agents fail to measure up to the exact requirements of a perfect antiseptic, we ask, in all seriousness, why use them any longer? In the opinion of the writer they possess just one single virtue—i. e., their ever-present and repulsive odor. Your constant contact with and use of them have blunted your olfactories; but wherever you go, your presence is an unpleasant reminder of painful experiences by reason of the odor which lingers about you.

If the exquisitely delicate odors of the jessamine, heliotrope or violet should prove objectionable to some because they constituted the principal offerings placed upon the casket of some loved one, it is no reflection upon the flowers, but is attributable wholly to association.

Many antiseptics of to-day clamoring for recognition are not only superior to creosote and carbolic acid, but are odorless, and those possessing an odor are rather agreeable to the smell and easily deodorized when desired.

In brief, when you discard these anti-

quoted relics, and cultivate more modern aspirants for antiseptic honors, you will find yourself in most excellent company, and in the enjoyment of the fruits which naturally come to the progressive man.

J. A. C.

CORRESPONDENCE.

How Useless to Worry.

Editor American Dental Weekly:

I visit a neighboring town, fifteen miles away, every Thursday. Several weeks ago a rather stout, fleshy young lady came in and asked that the two upper centrals be crowned. The natural teeth were broken off level with the gums, and were really quite foul. I cleaned them out carefully, and packed some oil of cassia in each and requested her to come the following Thursday and I would crown them. "Oh, no," she says, "I live fifteen miles away, and may not be able to come again for three or four months. It must be done now or never." So I proceeded as carefully and thoroughly as possible, and crowned them there and then, although I felt I was taking quite a risk.

The following Thursday, while busy with a large filling, the door opened and in came the young lady, with face flushed and eyes sparkling fire. The face being fat and round I couldn't distinguish any swelling, but I took it for granted that the abscess was working for all it was worth.

I pointed to a rocking-chair, which she took without saying a word, rested her elbow on the arm and her head on her hand—a pitiful object, apparently.

It is needless to speak of the numerous plans that ran through my mind to relieve the tooth and let me out easy. My first patient left, when I stepped up boldly and asked what I could do for her.

When she quickly said, "My twin sister was so pleased with the crowns you put on for her that I have come for similar work."

Imagine the change in my feelings.

Larimore, N. D.

V. S. W.

RECURRING CERVICAL DECAY.

On this subject, which is one of importance, and one that is constantly before the conscientious operator, Dr. J. D. Patterson, in the *Western Dental Journal*, writes so well and tells the cause so plainly that we take pleasure in quoting him as follows:

The explanation of the frequency of decay at the cervical wall is given by an author as due to the mallet fracturing the enamel and subjacent tissues, and these fractures, by imbibition of the oral fluids and subsequent fermentation, establishes caries. The obvious remedy, the author claims, is to return to hand pressure, and that "electric mallets and power mallets of all descriptions have a destructive tendency upon the cervical wall." This belief is the belief of a considerable number. Again, many practitioners place the blame upon imperfect preparation of the cavity at the vulnerable point; others chiefly blame the imperfect finish of the operation. While again we are told that this part of the tooth being frequently bathed in impure secretions thus facilitates the recurrence of decay, even if the cavity is well prepared and the filling well finished. The different ways of leaving the approximal separations after filling is also considered productive of decay, by not being self-cleansing and inviting food lodgment until decay supervenes. Again we are warned that non-adaptation of the filling to the cervical wall is the principal defect. All of these reasons have their army of adherents, and while I do not deny that cervical decay is superinduced by injudicious use of the mallet, by the imperfectly formed cervical wall, by careless finishing, by incorrect and unnatural spacing and separations, yet I am of the opinion that the worst enemy to the filling having a cervical border is the last one spoken of—viz., non-adaptation of the gold first introduced at that point. There is no doubt that cervical decay is more fre-

quent since the introduction of cohesive gold and the mallet, but the mallet cannot, I think, be as much at fault as non-adaptation, which comes with the mallet and cohesive gold when used without care. The operators who continually have recourse to condensation with the mallet and find their cervical margins failing, have recourse to the antiseptic or germicidal remedy—*viz.*, the use of a filling at this margin which will have therapeutic effect. Among the so-called therapeutic fillings for the cervical border, there are recommended tin foil—gold and tin combined—fibrous material and amalgam. The cervical border is found under these combination fillings to maintain its integrity, and so it is agreed that they have therapeutic value. Here is where the mistake is readily made. The better durability lies in the more perfect adaptation, and not, we believe, in any practical therapeutic value. The kindly recovery and the hardening of the tooth-structure, under these vaunted therapeutic fillings will, no doubt, be found to be due to the perfect adaptation, which prevents the presence of fluids and organic matter. *This is, we believe, alone the logic of the matter.* How has it been proved that tin, or tin and gold, possesses therapeutic value? Theoretically? No. Chemically? No. Experimentally? Yes; *apparently yes*; but the more *logical* durability and freedom from decay is not in tin, nor in tin and gold, but in its almost plasticity, which allows perfect adaptation upon even roughly prepared cervical walls. The advocates of tin and gold in alternate sheets tell us that the filling thus inserted loses its identity by some molecular change, and that the “mass will look like amalgam”; that though no mercury is used, “there seems to be an interchange of particles”; to all of which we say: “Not proven.” The filling of gold and tin will eventually “look like amalgam,” because of the oxidation of the tin, and the tin will seem to disappear; but it “disappears” by the force of malleting,

which powders the tin until the laminated character is lost. Then when the particles oxidize the tin is hard to find, but we have never found any difficulty in recognizing the gold, and we have dissected many combination tin and gold fillings. The vaunted “molecular change” and “interchange of particles” we believe, under existing and surrounding circumstances, and the materials used, is an unchangeable humbug. To my mind the virtue of any filling material in use, which has supposed or proved therapeutic quality in preventing or curing the caries, is extremely problematical. The antiseptic degree which we find strongest in the copper amalgam is so slight that, after studying the investigation of Dr. W. D. Miller, I cannot believe that the antiseptic quality is much of a factor in preventing recurrence of caries. The logic of better tooth-preservation is in the better adaptation of filling materials to cavity wall—especially to the cervical wall under discussion. The cervical border under gold fillings failed with more frequency, after the almost universal adoption of cohesive foil; *there is no doubt about that.* The gold was declared to be at fault, and not its adaptation. So the “new departurists” were instituted who found relief for the cervical wall with objectionable plastics. *Always* objectionable and always will be, I care not in what part of the arch they appear; and although the fever of new departure doctrines has long been broken, yet the recourse to plastics for the cervical wall shows that the faith in their therapeutic value is still abroad. What is the solution of the difficulty at the cervical wall of gold fillings? A solution that will harmonize with beauty as well as durability. It is found in the use of non-cohesive gold, combined with proper preparation of the cervical wall. Chiefly, however, the remedy lies in the superior adaptability of non-cohesive gold. From experience, I am inclined to believe that there is as much difference between

cohesive and non-cohesive gold, so far as effects upon tooth-bone and their manipulation and adaptability is concerned, as there is between cohesive gold and tin; this great difference seems to have been almost forgotten, and we desire to recall the almost *plasticity* of non-cohesive gold.

While we believe that the salvation of these cavities consists largely in the use of non-cohesive gold, yet no virtue in any filling material can atone for an improperly prepared cervical wall. One important point in the preparation of the wall is that too often a narrow rim of enamel is left that should be entirely cut away, as in preparing a root for a band crown. Of course there are many cases where the destruction of enamel has been slight, and where it is not necessary to thus remove all of it, but the great majority of cavities present only a narrow line of enamel, which is generally deteriorated, and ought to be entirely removed. The polishing of cavity edges, always of prime importance, is of *preëminent* importance at the cervical border. A jagged edge marking the line of union of the gold and enamel is the most glaring and universal defect at this point. A chisel with hard temper and keen edge will commence this work best, and then the edge must be smoothly polished. This last is the most difficult procedure. In addition to the strips and tapes with powder, the recently invented sand-paper, emery and cuttle fish disks, are invaluable. In addition to these, there is still an ingenious polisher for inaccessible cavity edges at the cervical border, which is superior for reaching edges that cannot be reached with disks or strips. It is made by sawing a fine slit in the end of a plain round-point wood polisher, inserting the end of a short polishing strip, turning so as to wrap the strip rough side out. As the surface wears away, new surface is uncovered, and we have a means of polishing these inaccessible parts of the cervical border. I have found nothing to compare with this

little device, which was described in a recent dental journal. I will not go farther into the preparation of the cavity, and will pass over many directions for shaping any cavity with a cervical aspect, which you all know, and only mention what may not be so frequently practiced among the majority of operators.

To best protect the cervical border from recurrence of decay, the insertion and shaping and finishing of the whole filling, plays, of course, a conspicuous part, but of a lesser importance when compared to the use of non-cohesive gold and preparation of wall, which brings the perfect adaptation at the disputed territory.

Now, to avail ourselves of non-cohesive gold at the cervical border, we are met at the outset with the difficulty generally presented by the shape of the cavity. With non-cohesive foil it is always best to depend upon mechanical union and the principle of gomphosis to retain the filling. We cannot avail ourselves of this in the majority of these cases, so we have recourse to that admirable instrument, the matrix, which will often make a simple cavity and thus facilitate the use of non-cohesive gold. When the dangerous cervical wall is passed and, as is generally the case, the work must be contoured, then the cohesive foil is added and the filling finished. It is not necessary or not often possible to resort to lateral pressure or wedging, but the non-cohesive pellets are to be used much as cohesive foil is commonly used at the same point. The first pellets should be large, and after being placed, insert a hard-rolled pellet of cotton, and with this as a pad the first pieces of gold can be pressed or malleted to perfect adaptation without danger of injury to cavity border, and the gold will be pressed into the most acute angle. When uniting the first cohesive pellets do not entirely condense the last of the non-cohesive, and then there will be little difficulty in uniting the two, whether the matrix wall is used or

not. Another advantage gained by the employment of non-cohesive foil at this border, is the ease with which it is finished, compared to the harder surface presented by cohesive foil.

Water as a Therapeutic Agent.

The *Phrenologic Journal* gives the following hints on the applications of water in severe attacks of illness. The adult members of a family should keep them in mind for an emergency:

A strip of flannel or a soft napkin, folded lengthwise and dipped in hot water and wrung out, and then applied around the neck of a child that has the croup, will usually bring relief in a few minutes.

A proper towel folded several times, and dipped in hot water, quickly wrung and applied over the site of toothache or neuralgia, will generally afford prompt relief.

This treatment for colic has been found to work like magic.

Nothing so promptly cuts short a congestion of the lungs, sore throat or rheumatism, as hot water when applied early in the case and thoroughly.

Hot water taken freely half an hour before bedtime is an excellent cathartic in case of constipation, while it has a soothing effect upon the stomach and bowels.

This treatment continued a few months, with the addition of a cup of hot water slowly sipped half an hour before each meal, with proper attention to diet, will cure most cases of dyspepsia.

Ordinary headaches almost always yield to the simultaneous application of hot water to the feet and back of the neck.

Gold in the Sea.

Yes, there is lots of it at the bottom, but two shrewd men of Connecticut have a "scheme" for extracting the precious metal from sea-water. They say that one cubic mile of sea-water contains \$100,000,000. Look out for cheap bridge-work.

Bacteriological Researches, with Several Materials Used for Pulp-Capping and Root-Canal Filling.

Thorough and intellectual experiments made by Dr. Köhne, Frankfort-on-Main, Germany, have led to promising facts which may result in a total change of materials used for above purposes heretofore.

Dr. Köhne's special aim was to throw light upon the disinfecting power of the following four substances:

1. Formagen.
2. Phenolciment (zinc oxid, 15; iodoform, 1; acid carbol., 10; alcohol absolute, 3; aq. dest., 5; zinc chlorid, 5.)
3. Pulp-analgen.
4. Formalin cement: (zinc oxid, with one drop of 40 per cent. solution of formalin mixed with the phosphate of zinc to a soft cream.)

Fresh pus was taken and spread on gelatine. In a short time the formation of staphylococci could be observed under the microscope. These cultures were mixed with liquid gelatine and the mass poured in double-dishes in layers of 2 mm. thickness. Before the gelatine hardened small pieces of above four materials were inserted in same, apart from each other. A few hours after this a marked change took place. The gelatine took a muddy appearance, but soon cleared again in a certain radius of the cement pieces. Outside of this radius the mass remained muddy, and there was a sharp line of demarcation to be seen.

The size of the radius of the clear zones around the different pieces was as follows:

Formagen, about.....	1½ c'm
Phenol cement.....	2 "
Pulp-analgen.....	1 to 1½ "
Formalin cement.....	6 "

Small quantities taken from within those clear zones and transferred on sterilized gelatine acted negatively, a proof that all cocci and germs had been killed entirely. The same result with gelatine saturated with cocci, put on the clear zones, no further development of cocci took place; while the same put on another gelatine showed activ-

ity and increase in numbers within a few hours.

Formalin is leading the others in its disinfecting power, acting through the diffusion of its gases in the tissue, it must naturally be still farther reaching in the latter than in gelatine.

In connection with cement, Dr. Köhne uses formalin advantageously as protection over arsenic applications, and as a pulp-capping, further on as filling in cases of putrid root-canal, after having cleansed them of any putrid matter. Where canals are not putrid he cleanses, as well as possible, applies carbolic acid and then fills with formalin cement. In cases of deep-seated cavities it replaces gutta-percha as a temporary filling. It can be worked with ease, does not stick on the instruments, and is a homogeneous mass when hard. Hardening takes place quicker than with the three others mentioned, causing the formal gases to be shut up in the canals and to be pushed out through the apex by their own expansion. Slight irritation at those parts seems to prove this process of working.

Formalin and its application have been spoken of more frequently of late. Its general use seems to be guaranteed in the near future.

F. A. B.

Sandarac Varnish.

This is the nicest of all the preparations I know for coating impressions, or any like work when plaster is to be separated. By keeping on hand a supply of the gum, and of alcohol, it can be made simply by dissolving the gum in the alcohol, and is always ready for use.

The impression must be varnished before it is thoroughly dry, and after varnishing it should always be thoroughly soaked in water just before pouring the cast, but never oiled. Oil has no business on an impression.

This obviates all danger from bubbles, and insures a smooth, glazed surface on the mold.

D. D. A.

To Take Impressions of Cleft Palate.

The following method of securing an impression of a cleft palate by Dr. Lewis, in the *Stomatological Gazette*, may prove valuable:

Having warmed up a sufficient quantity of modeling composition, use an ordinary tray, such as you use for partially pressing the mass into the cleft, press it back into the cleft and let it remain there until sufficiently hardened to be withdrawn without changing it very much. It is not necessary to be accurate. That would give an outline by which you can make a model, and that model you will have to turn so you will mould a cup by which you can take an accurate impression. Then take a sheet of wax, such as is made from shellac or something else—I don't remember just what—and mold that over this model, and you can get an absolute impression. You have a cup then for making a tray that will go to all parts without fear of inflaming or irritating at all.

Eye-strain from Poor Window-glass.

Before the American Public Health Association, Professor Edward Jackson is reported in the *Medical and Surgical Reporter* as follows, on window-glass and eye-strain:

Inequalities in the thickness of a pane of glass make the pane act on the eyes looking through it like a lens. The glass is then distinctly part of the eye. When the eye wanders over a pane that is unequal, the muscles are unable to adjust themselves to their quickly varying conditions, and eye strain is the result. Car-sickness, that well-known feeling of nausea which comes in a long journey on the railroad, is due in most cases to this eye-strain. Railroad companies should by all means put plate glass of moderate thickness in their car windows, for that glass only is free from inequalities.

Assure the Patient.

While reading an interesting article on "Hypnotic Suggestions in the Cure of Disease," in the *Atlantic Medical Weekly*, the caption of this article came into our mind. It originated last summer while sitting in a chair as a clinical patient at the Georgia Dental Society meeting. Dr. Johnson, of Macon, Ga., was demonstrating cataphoresis in a large cavity of an upper molar. While there was no pain from the bur, yet there was an apprehension that he might "hit the nerve." A word of assurance from him at intervals would have allayed all fear; but he did not give it. And we resolved from that very time that henceforth and forever we would, when operating for a nervous patient, or one who was even apprehensive of danger, assure him that we would not touch the "nerve." And we have carried out that resolve with great satisfaction to patients and to the operator. If the patient has confidence in the operator's skill and ability, and the operator from time to time assures him that he will not "hit the nerve," not once, for he may think that you have forgotten, but many times during the operation, it will be accomplished with almost astonishing results.

It is a degree of hypnotism, and is worthy of a trial by any operator. This leads us to say, however, that there are operators so rough in their manipulation and in handling patients, that it is a wonder they have any patrons at all.

Even though you are operating for apparently a bear in human form he will appreciate gentleness and the assuring word that you will not "hit the nerve."

A letter from Cincinnati says: "I saw in the *Dental Brief* that a weekly dental journal is being published. I want to see it." This shows that the *Dental Brief* circulates, and is courteous enough to say "howdy" to the AMERICAN DENTAL WEEKLY, which is now twelve weeks old and getting "pearlier" every day.

R. D. CRUTCHER, D.D.S.,

- President of the Tennessee Dental Association.

Dr. Crutcher was born in Maury county, Tenn., in 1868. At the age of eighteen he was turned loose from the farm to make his own way in the world. After spending more time in agricultural pursuits he began the study of dentistry, graduating at the Dental Department of the University of Tennessee at the head of his class in 1889. In 1890 he married Miss Anna Kercheval. In Leesburg, his home, he has a good practice. His State Society elected him president last year.

Went Hunting.

How restful and delightful it must be to those who love the sport, to get away from office duties and gun it for a week. Dr. Johnson, of Macon, Ga., has just returned from such an outing, and as he is one of the editors of the AMERICAN DENTAL WEEKLY, the readers may look out for something real invigorating from his facile pen.

THE
American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - - ATLANTA, GA.

EDITORS AND PROPRIETORS:

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription \$2.00 per year; \$1.00 for six months—including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, December 2, 1897.

The Twelve-Year Molar, the Six-Year Molar, Etc.

Is it not about time that intelligent dentists should stop saying "six-year molar," "twelve-year molar," "canine," "eye tooth," "wisdom tooth," "stomach tooth"? If not, it would be perfectly in order to say twenty-one-year molar. Some actually say "six-year-old molar." It is much easier to say first, second, or third molar and cuspid. It is not only wrong to use such expressions, but it actually sounds vulgar and uncouth, and thoroughly unprofessional and unanatomical, if you will allow the word.

The idea of an educated dentist writing and reading an essay on "The Twenty-one-Year Molar and Its Non-eruption," or "The Stomach Tooth and Gastric Irritation," or "The Eye Tooth and Iritis," or "The Canine Tooth and Hydrophobia."

Canadians should be proud of the *Dominion Dental Journal* and its fearless editor.

Improved Head-rest.

WANTED.—Some one to improve the head-rest of the dental chair—something that will not oblige a patient to bob his head about trying to find the center.

The above lines are from the editor of the *Dominion Dental Journal*. For his and others' sake, we will tell him how our head-rest was improved by a lady patient. We use the Wilkerson chair, and if there was ever a more uncomfortable head-rest we have not seen it. The lady in question is the wife of a furniture-dealer who has an upholstering establishment. Every time she occupied the chair she complained of the head-rest, and asked if something could not be done to make it comfortable. We tried by folding towels and placing them on it. Finally she came for a sitting and brought a small velvet feather pillow. Before sitting in the chair she placed the pillow on the rest; and when she left the chair, she said: "Now it is comfortable, and you may keep the pillow for the comfort of your other patients." And a pillow has been used ever since, with no complaint from patients.

We Tip Our Hat.

To the genial and gifted editor of the *Western Dental Journal*, Dr. J. D. Patterson, we tip our hat, and bow as low as our rotundity will allow, for the following complimentary notice of the **AMERICAN DENTAL WEEKLY**:

"Our readers will see that we make frequent clippings from the **AMERICAN DENTAL WEEKLY**. We do so because we like the matter it contains. The editors are making a success of it in point of professional interest. We trust they will also make it financially successful."

Now, my dear doctor, while the **WEEKLY** is really catching, it isn't named Catching's **WEEKLY**.

The Principle of a Newspaper.

The following from the pen of Dr. W. Geo. Beers, editor of the *Dominion Dental Journal*, is so characteristic and true of "the press" that we must publish it:

"Talking the other day to a friend of ours, who is the editor of an influential daily paper, we chaffed him on the policy of the press, which, editorially, would not condone quackery and imposture, but which welcomes the very worst form of it in its columns, providing it is paid for as advertising. It struck me as a code of newspaper morals worthy of the political code of a Tarte. In a Socratic way I disputed the justice of such inconsistency to that portion of the public—mostly fools—who got their gospel of dentistry from the advertisements. "Do you believe," I asked, "that the statements and pretensions in the flamboyant advertisements of 'Skin-em & Cheat-em' are true?" "No, I do not," he emphatically replied. "Then you believe that they are lies?" "I suspect so." "Will you let me insert a letter in your paper protesting against your belief, and defending what you say you believe to be lies?" "No," he answered; "that would be against the principles of the paper." "Well, will you let me insert a letter exposing these lies and giving proofs that they are lies?" "No, that would be against the principles of the paper, too!" "Will you tell me what are the principles of the paper?" "To make dollars for the publisher," he replied frankly. "Is there, then, no way to inform the public of the dangers and damage and imposture of these advertising quacks?" "Yes, a very easy way. You can tell all the truth or all the lies you like in the advertising columns."

Wet the Band.

Some one has said that when the engine band slips and there is not time to shorten it, to wet it.

Cheaper Than Shoemaking.

Vulcanite plate-work has become cheaper than shoemaking, with a lower tendency. A shoemaker will get six dollars for a pair of shoes that will last, say twelve months; a dentist will get ten or fifteen dollars for a set of teeth that will last, say ten years. Six dollars per year for the feet and one dollar per year for the teeth. Is it not a shame that professional work, in which the talent of the artist and that of the anatomist is combined to construct, should fall so low?

What has brought about this change and degradation?

Olibanum for Plate-Sores, Etc.

Olibanum is a gum resin from the *juniperus lycia*. A writer in the *Dominion Dental Journal* says: A very simple and effective method, for instance, with a vulcanite plate pressing too much upon a sore part of the ridge, is to lay a thin layer of the resin or any other efficacious paste, on interior of the plate in the spots corresponding to the sore places. It is at once soothing and healing; at the gingival margin, in hypertrophy, it is a capital thing to pack into pockets, even into flesh wounds. The olibanum has a wonderful healing power.

How They Like It.

Of course I want the AMERICAN DENTAL WEEKLY. It is a good thing, and will meet a warm reception everywhere.

W. H. WEAVER.

LaGrange, Ga.

I like your journal. It is just the thing we have been needing for many years.

Very truly,

J. H. BENTON.

Newbern, N. C.

Dr. J. M. Mason, of Macon, Ga., one of Georgia's wide-awake dentists, paid this office a delightful call.

Treatment of Pyorrhoea.

Treatment of pyorrhoea has been a source of worry to the profession for many years. Within the last two or three years many new remedies have been suggested, as well as old ones revived. We take the following from the *Dental Brief*, by Dr. A. H. Peck, with the suggestion that while it may not be so "necessary to exercise care as to the quantity of the powder used," that it would be necessary to exercise care not to leave it clinging to the teeth or concealed in any quantity in the pus pockets.

Sulphate of copper is a most useful agent in the treatment of pyorrhoea, and it is also a favorite of mine in the treatment of abnormal swelling of the gums from whatever cause. The gums are dried as thoroughly as possible and the copper applied by means of a piece of orange wood, whittled thin, which is first dipped in water and passed into the copper, a quantity of the powder will cling to the stick; then pack the copper down between the teeth and swollen gums. You can use it freely. It is not necessary to exercise care as to the quantity of the powder to be used; let it remain there for two or three minutes, then with a syringe of warm water wash the excess away. You will be surprised in the course of two or three days, and also much gratified to see the extent to which the swollen gums have been reduced.

Greeting to the Ohio Association.

The Ohio Dental Association will be in session before another issue of the AMERICAN DENTAL WEEKLY appears. We send hearty greetings, and are sure that the able president, Dr. L. E. Custer, will guide things right, and that Editors Taft and Bethel will see that every word written and spoken will appear in print. The Buckeyes are cordially invited to the Southern, which meets in St. Augustine, Fla., February 22.

Society Papers.

The following sensible article is from the *Medical Record*. Let the word medical be read dental, and it will apply as well to dental societies:

A physician should not presume upon the time and patience of his colleagues by reading a paper composed of truisms, some facts borrowed from text-books and much padding. Such exhibitions contribute to international ill-feeling and to personal disdainment. No more should he report procedures based on alleged chemical physiological experiments which he is not ready and able to demonstrate by chemical or physiological tests. Above all, he assiduously should refrain from announcing papers that he does not anticipate being able to present. This latter procedure has already been done to death. If he will take the results of his honest work and intelligent thought, it matters not whether they be based on experimentation or observation, he may be assured of kindly reception and courteous attention.

Aseptic Dentistry.

I am confident that all who follow the advice below will be delighted with the results:

Use as a wash for the hands before and after each dental operation, Steifel's trikresol soaps (5 and 10 per cent.), and trikresol in solution as a sterilizer for dental instruments (the plating or polish of which will not be injured in the least by its use). Many other dental uses can be found for trikresol, as it will take the place of and is superior to carbolic acid, creolin, cresol, or bichlorid of mercury solutions, etc.

C. C. STANLEY, D.D.S.

Columbia, S. C.

Please remember, when you are remitting for the AMERICAN DENTAL WEEKLY, if you send your local check, to add ten cents to the amount, which amount the banks charge for collecting.

An African Dental Fashion.

Miss Margaret C. Scott, of the African Inland Mission, mentions a difficulty encountered in the attempt to learn the language of the Ukambas, of Eastern Africa. Fashions in dentistry are found to have something to do with the understanding of human speech. She says:

"One of the customs which has a great bearing upon our work is the filing of the teeth. The first impression one has when a Ukamba is seen to laugh, is that of the mouth of a cat instead of the mouth of a man, because all the teeth are sharply pointed. This affects the pronunciation greatly, and it is nothing unusual to hear one word pronounced four or five different ways, because the teeth of the persons may have a different degree of filing. As the language must be written phonetically, we were often perplexed to know what to do; so it resulted in saying a word in the presence of a number of the people, and then taking the sound given by the majority and writing it on the books as probably correct."

Extract of Scullcap.

Dr. C. H. West, in *Dental Review*, speaking of narcotics for nervous patients, recommends 30 to 35 drops of extract of scullcap as a dose. The prescribed dose is from 30 to 60 drops, but had never needed more than the above. It was, as far as he knew, perfectly harmless, with no ill after-effects.

Patients who seemed to have no control over their nerves had submitted to long and tedious operations with the aid of this nervine, remarking that they "felt so easy they could almost go to sleep."

White Gutta Percha.

It is said that gutta-percha, in the form of a white powder, can be precipitated, from a chloroform solution of the material, by the addition of ether.

The Death of Madame Berthaux.

An interesting figure has passed away from the French dental profession in the person of Madame Berthaux, of Soissons, the wife of a dentist of that town. This lady was seventy-four years old, and had been practicing dentistry for forty-five years, and as there were but few women in the profession at the commencement of her career, she may be said to be the *doyenne* of French women dentists.—*Jnl. Brit. Dent. Asso.*

Supraorbital Neuralgia.

Dr. T. J. Pugh recommends in the *Southwestern Medical Record*, in unyielding supraorbital neuralgia the hypodermic injection of a solution containing two grains of the tincture of veratrum viride, and one-fourth grain of morphia. The pain is burning for the instant, but immediate relief follows. He has used it for seventeen years without failure.

In cases of intense neuralgia, Dr. Franck advises to use a 1 per cent. solution of the acid of osmium. Injected directly on the nerves it causes pain for some moments, followed by entire relief. The acid seems to destroy the nerve fibers. Facial neuralgia is treated with weaker doses in the beginning.—*Centralblatt für innere Medizin.*

Fool and Philosopher.

It is a celebrated saying of Cato, that a philosopher profits more from a fool than the fool does from the philosopher, for the fool will not heed the advice of the philosopher but the philosopher will learn to avoid the errors of the fool. D. D. A.

Bridge Anchorage in Amalgam.

When the anchorage for a bridge is to be made in an amalgam filling, Dr. Register says oil the gold and it will have a tendency to prevent amalgamation.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., DECEMBER 9, 1897.

NO. 13.

WHAT IS THE BEST METHOD FOR TEACHING CHILDREN TO CARE FOR THEIR TEETH?

BY S. B. HARTMAN, D.D.S.,
Fort Wayne, Ind.

One of the most promising signs of the times in the way of general knowledge of science and art by the people of the future, is that the day has dawned when no longer a slight understanding of the fundamental principles of education are sufficient to meet the requirements of a business or professional life, and the manner of teaching the young of to-day is far different than in the past. The great discoveries of the present time are the results of a greater reasoning power. The scholar to-day in our schools is farther advanced along the line of a general and broad education at fourteen or fifteen years of age than persons of eighteen or twenty, two decades in the past. This change has come from the tendency to reach out and grasp, analyze and study those studies that are so closely connected with our well-being, and from which we derive health and happiness.

One cause that has produced this advancement has been the strengthening of reasoning powers through the use of illustrations and mechanical and chemical experiments. The child of to-day is taught cause and effect, and is no longer dwarfed with baby talk and kept in check in mental growth until he verges on manhood. Not only are his studies in the primary and pre-

paratory departments of school life those relating to such branches that may in future days be useful to him in business pursuits, but he is instructed to care for his body that it may be strong and healthy; that the great system of organs may perform their functions in harmony; what foods are most suitable for persons performing certain work, or those living in different localities; a chemical understanding of foods which will best promote growth, and most readily assimilate and replace waste, and realize that one of the greatest studies of man is man.

The study of human physiology is no longer tedious and dry to the students in many of our public schools, for the methods of its teaching have changed, the text-books in this branch are not considered as a reader, making little difference if what is read is comprehended or not, because the teacher is unable to explain its teaching; but at this time, in many schools, local physicians frequently talk to the pupils on the relation that one organ sustains to another, its development, and how best to care for the same. They are taught the effect of medicine in assisting nature to cure disease or prevent it.

A gentleman in an eastern city related this occurrence to a friend: "Let me tell you what occurred at my table. A guest was taken dangerously ill at dinner—insensible—and there was a call for brandy to restore him. My little boy at once exclaimed, 'No, that is just what he don't need; it will paralyze the nerves and mus-

cles of the blood-vessels so that they will not send back the blood to the heart.'

"When the liquor was poured out to give the man, the lad insisted on pushing it back, saying, 'You will kill him; he has too much blood in his head already.'

" 'How did you know all that'? his father asked.

" 'Why, it is in my physiology at school.' "

It seems the text-books prepared by such men as Professor Newell Martin, F.R.S., of Johns Hopkins University, had succeeded in giving the lad some definite information which was proving useful.

Thus we can observe how early impressions are retained in the mind and at an important moment manifest its power for good. Our profession, as a branch of the healing art, realizes the great amount of health to the child if he can fully understand the importance of the teeth, the care they should receive, and when erupted, the diseases to which they are subjected, and what treatment should be given for their preservation.

Parents do not often comprehend the importance of caring for their children's teeth, although every other comfort, it seems, is a delight for them to grant, but are very indifferent to the teeth; yet, if the child could have some information and advice pertaining to his teeth, the parent would often be reminded by the child in reference to those organs so essential to digestion and facial expression.

The dental profession has long known the need of some method for the promotion of general information in reference to the teeth and associate parts of the mouth, and have resorted to various methods, more or less successful, such as newspaper articles, pamphlets, etc., yet the desired results are not accomplished; and, to me, the only way that will give the greatest fruits for the labor is talks personally to children. It has been

my privilege on several occasions to give talks of this kind to children in the city of Fort Wayne, and it is surprising how much interest they manifest in the subject. If in every town or city, dentists would devote an hour or two in this manner, many a child would appreciate his efforts, and would be thankful to him.

Several years ago, at my first talk on "teeth" to school children, was present a little boy who carries newspapers out of school hours to aid in his support, and he has become so interested in caring for his teeth that now his visits to the dentist are frequent, and recently he remarked, "I never want any of my teeth pulled." And this is not the only case where an appreciation has been shown. I have watched closely what results would follow, and a number of dentists have had calls from young persons in consequence. Perhaps you may wish to know how I conduct these school talks, and with the hope that you may do likewise, or a better way, I relate my method of conducting them.

For about ten minutes at the commencement or introduction, my remarks pertain to digestion and how the teeth prepare food for the same. Following, reference is made to facial expression, using charts to illustrate the teeth in irregular positions, and the unnatural appearance thus produced. By this time I have the attention of those whom I am addressing. I then talk on the deciduous teeth, time of eruption and shedding. I exhibit a number of specimens showing conditions of teeth lost prematurely, impressing upon the pupils the importance of keeping these organs until nature indicates the necessity of their removal, explaining what such indications are; exhibiting to them charts explaining their relation between temporary and permanent teeth, and why temporary teeth should be filled and receive care. After my remarks an opportunity is given for questions, and I have a general conversation on the teeth.

DEATH FROM HEMORRHAGE AFTER TOOTH EXTRACTION.

We find the following account of a case of fatal hemorrhage in the *Münchener Medizinische Wochenschrift*, which is interesting from the fact that the patient undoubtedly lost his life from a lack of knowledge in handling such cases. The account reads as follows:

"Having tried several domestic remedies without stopping the bleeding, on the second day he consulted a medical man. By means of the electric cautery he succeeded in stopping the bleeding, and sent the patient home with proper instructions. In the course of about an hour the cotton wool dressings were again soaked with blood, and on removing this the hemorrhage was greater than ever and from a larger area. Every means was tried—hot water, steam, perchloride of iron plugs, turpentine, antipyrin, ergot, ice bags and 'stent' compresses, but with negative result. The efforts of two other physicians were of no avail. Normal salt solution was injected three times to make up for the lost blood, but on the eighth day the patient died. It is worthy of note that the patient had himself previously removed a loose premolar. At that the bleeding had spontaneously ceased on the second day."

This patient was a hemophilic subject, but that was not a sufficient reason that his life should have been lost. He had on a previous occasion removed a tooth for himself, as in this case, and succeeded in stopping the bleeding. Had a proper compress been made there would probably have been little trouble to stop the bleeding. Dr. Benedict, of Athens, Ga., has under his care a family of bleeders, and though his mind is often taxed to devise compresses for the different accidental wounds and cuts from which they have hemorrhage, he has never yet failed to stop the flow of blood.

He writes that one of the most difficult cases he has had was that of a young man who fell and bit his tongue. He finally devised a compress for that and arrested the hemorrhage.

An interesting case came under my own personal supervision only a few months ago. A mulatto girl of this type had a tooth extracted by a "dental parlor" fakir. He failed to stop the bleeding, which had continued without interruption for twenty-four hours, when I was consulted. An impression of that portion of the areolar ridge and teeth adjoining, was taken with modeling compound. This was trimmed up smooth and even with a sharp knife. A pledget of cotton was saturated with sub-sulphate of iron and pushed into the socket and the now hardened impression or compress was placed over it and forced down tight. To hold it in place the occluding teeth were brought hard against it and a bandage wound tightly over the head, passing under the jaw to prevent the pressure being relaxed. In twelve hours the compress was removed and the bleeding had permanently stopped.

A vulcanite compress would be better in most cases, but the modeling compound answered the purpose for this case perfectly.

H. H. JOHNSON.

A Cat Hospital.

A feline hospital is in operation in Washington City, at Nineteenth street and Connecticut avenue, which serves as a home for sick and stray cats. The *Maryland Medical Journal*, which is responsible for this cat story, says the institution was endowed by an elderly maiden lady who recently lived in the cottage.

Iron in both the organic and metallic form is absorbed and eliminated by the system, and becomes a part of the body. Its continued use generally causes an increase in the quantity and quality of the blood.—*Health Magazine*.

DR. THOMAS W. EVANS.

American history and biography is largely made up of the achievements of self-made men. Hence, the records of such are familiar reading to Americans, but they never cease, for that reason, to attract widespread interest, not to say intense admiration, always. We offer no apologies, therefore, in laying before our readers some additional facts relating to the life of the late Dr. Evans, in whom every American dentist must feel a just pride. Dr. G. Elden Mills, in the *Dental Digest*, says of him:

He personally directed the movements of the Red Cross Society, and it is said was the only man in Europe who might pass from camp to camp.

When the French communists were seeking for the Empress Eugenie to destroy her, he disguised her as a maid and aided her in her escape. In Germany he is known and loved for the services he rendered the ill-starred German Emperor Frederick when, as the Crown Prince, he was battling for his life against the inroads of the disease to which he finally succumbed. The Prince was at San Remo dangerously ill with the disease of the throat which baffled the skill of the most learned scientists of all Europe, when Dr. Evans was called into consultation. Sir Morrel Mackenzie, the eminent English surgeon, and Dr. Bergmann, of Berlin, were in charge of the distinguished patient. They decided on an operation to remove the growth, and he was present. At this time the old Emperor William was also lying sick unto death. It was known that his death was a matter of only a few days' time, and also that unless the cancer could be removed from the throat of the Prince he would precede his father to the grave. A tracheotomy was performed and the bleeding which followed could not be stopped by all the efforts of the physicians in attendance. Dr. Evans hurried to a silversmith's shop, and with his own hands constructed a silver tube, which was fitted

into the wound and stopped the bleeding. Twenty-four hours later Emperor William died and Frederick lived for thirty days as Emperor of Germany.

Dr. Evans's fortune, which is estimated at \$30,000,000, was amassed largely by investing in real estate in the vicinity of the Bois de Boulogne, in Paris.

Dr. Evans left no children. He founded the Home for Young American Women in Paris, which has proved a veritable godsend to many an American girl abroad. When here in August he announced it as his intention to leave his fortune to the cause of education, probably for the founding of a national institute of dentistry.

In stature Dr. Evans was below medium height, had stooped shoulders, a thin face, high cheek bones, and wore short side-whiskers.

The death of Dr. Thomas Evans closes the earthly career of a man more noted than any other practitioner of dentistry. From a worldly standpoint it has been illustrious and brilliant. Royalty of the greatest renown have not only honored him by placing themselves under his care, but have lavishly bestowed upon him in return for these services great remuneration. The world has set upon his honors a high value.

It cannot be doubted that Dr. Evans's career proves him to have been more than ordinarily endowed in worldly wisdom. There are few men, even had their lives fallen into such places, that could have reaped such a harvest. It would be impossible for a man like Dr. Evans to be without great generosity of heart, and, since he was so blest, not to have had a strong sense of appreciation. His biography (we doubt not one will be published) will read like a romance, and the souvenirs that have been placed in his cabinets will arouse a feeling of worthy pride that he was a member of our profession. We always felt in the presence of Dr. Evans that he had not been spoiled as an American. He was a gentle-

man by instinct, and he maintained this quality in all his associations with his fellow practitioners. Dentistry in Europe was raised by him to a height that it would not easily have attained otherwise. When we realize that he was taught in the school of fifty years ago, which was far deficient in instruction to the colleges of to-day, the natural capabilities of Dr. Evans are shown even more strongly. We have seen his work, as many have, and it did credit to the operator at his time. His financial accumulations make him appear a Monte Cristo, and there is a possibility that a large endowment is to come from this marvelous fortune for our so-called poverty-stricken profession.

No Dental Parlor Fee in This.

If at times you feel discouraged, and are inclined to adopt the Cheap-John method, we clip the following encouraging item from a correspondent in *The Dental Digest*:

"Artistic dentistry pays in New York. We have seen a case, the results of which were so satisfactory to the patient that a check for \$750 was very cheerfully given in payment. By artistic dentistry we mean regulating the anterior teeth by torsion, by the use of silk, etc."

But he adds:

"We are always glad to see a generous fee given for valuable service, but such a spirit has not been very freely manifested, particularly in New York and Brooklyn. A prominent dentist said to us recently: 'It is a strange thing that while more legislating has been done in New York State than in any other to keep down quackerish practice in dentistry, yet there is no other place where it prevails so largely.' A leak somewhere."

If Dr. Barrett would only direct his superb energies against this class, surely the dental atmosphere in his State would be greatly purified.

J. A. C.

A Peculiar Effect of Cocain.

In a recent issue of the *Revue Inter. de Rhinologie* appears an interesting account of vesication produced by cocain.

Broeckaert recently observed a remarkable vesicant action due to application of cocain solution. He had been consulted by an army officer on account of a slight obstruction caused by a certain degree of hypertrophy of the inferior turbinated bone. In order to anesthetize the mucous membrane he was about to apply cocain, when the patient interposed and declared that it would produce dangerous effects; that once an application had been made to the skin at the seat of a boil, and in the course of a few hours an eruption occurred which he could compare only to the effect of a fly-blister. Broeckaert could scarcely credit the statement, but let fall a drop of ten-per cent solution upon the man's forearm. Two days later the man returned and surprised him by showing an eruption of small vesicles, the extent and form of which corresponded exactly to the spot upon which the cocain had been dropped. To dissipate all doubt he tried a new and decisive experiment. The patient's eyes being closed, he applied to one arm a drop of a freshly prepared cocain solution and to the other a drop of distilled water, the patient believing that both were solutions of cocain differing only in strength. The experiment corroborated the patient's former statement; the cocain solution alone caused vesication. The effect in this case was in many respects comparable to that of cantharidal plaster. At the end of a certain time the vesicles dried up, but they left behind them a slightly pigmented cicatrix, proving that the irritation had been comparatively strong and had even led to the destruction of some extravasated red corpuscles. Curiously enough, corrosive sublimate, carbolic acid, iodoform and other more or less irritant substances had no such effect upon this

man. He was robust and in good health, but had previously had some arthritic manifestations.

Knocking the Tooth Out.

It is said to be not an uncommon sight in China to see two or more persons holding another on the ground, while another with a hammer and a punch proceeds to drive out an offending tooth.

An American dentist, practicing in China, says the natives do not seem to suffer pain from the severest dental operations; that even a child will sit in the chair and undergo tooth-filling without wincing the least. Whether there is much in this or not we do not know, but we do know that the negro cannot stand pain. One would almost die with toothache before consenting to have a tooth extracted without "takin' of der viceated air" which the "dental parlors" have made known to them.

Depressed Corundum Disk.

After the disk is mounted on the mandrel, place it in the hand-piece, and while running the engine rapidly hold the side of the disk close to the flame of a lamp and at the same time bear against the side of it with the handle of an instrument. As the disk softens the pressure by the instrument will give it a concavo-convex shape. Such shaped disks are very useful in dressing down teeth for crowning.

To Clear Syringe Point.

To open up the point of an abscess or air syringe, hold the metal point over an alcohol or gas flame, and at the same time press upon the rubber bulb. When the point gets sufficiently heated to char the debris, causing the stoppage, the air pressure from behind will force it out and clear up the point.

"How Do You Do?"

The ordinary polite inquiry, "How do you do?" calls for nothing but a conventionally polite response; but if a man is past "the allotted age," and a philosopher besides, it may elicit a reply full of meaning and worthy of record.

When John Quincy Adams was eighty years old he met in the streets of Boston an old friend who shook his trembling hand and said:

"Good morning! And how is John Quincy Adams to-day?"

"Thank you," was the ex-president's answer, "John Quincy Adams himself is well, sir; quite well, I thank you. But the house in which he lives at present is becoming dilapidated. It is tottering upon its foundation. Time and the seasons have nearly destroyed it. Its roof is pretty well worn out. Its walls are much shattered and it trembles with every wind. The old tenement is becoming almost uninhabitable, and I think John Quincy Adams will have to move out of it soon; but he himself is quite well, sir; quite well."

With that the venerable sixth president of the United States moved on with the aid of his staff.

It was not long afterward that he had his second and fatal stroke of paralysis in the Capitol at Washington.

"This is the last of earth," he said. "I am content."—*Youth's Companion*.

Boric Acid Dentifrice.

Boric acid is a strong antiseptic, and the following makes a good dentifrice. If the guaiacum is too astringent it may be omitted:

Boric acid (finely powdered).....	40 grains.
Chlorate of potassium.....	$\frac{1}{2}$ drachm.
Powdered guaiacum ..	20 grains.
Prepared chalk.....	1 drachm.
Powdered carbonate of magnesia	1 ounce.
Otto of roses.....	$\frac{1}{2}$ drop.
Mix.	

Preparation of Cavities.

In an extract from an essay by Dr. C. B. Golson, as published in the *Ohio Dental Journal*, on "Method of Preserving Rapidly Decaying Teeth," we note the following points of special interest: "After as thorough an excavation as judgment will permit, we are frequently compelled to leave a small pad of decay at the bottom of the cavity for fear of exposing the pulp. To fill over it with any material without first taking necessary precaution would be fatal to the success of the permanent filling. It is the bacteria thus left within the cavity which destroys many teeth, however carefully lined and filled.

"After excavating, the next step is to dry out with warm air (this may be done while excavating, as it reduces the pain to the minimum), which should be a slow stream of warm air; not hot, but just warm enough to drive back the serum and evaporate the contents of the tubuli to some extent. Then bathe the cavity with a drop of solution of caustic soda, which is instantly sucked up by the dry tubuli. The soda penetrates the tissues of the tooth to a considerable depth, neutralizing all the acid that may be present in the tooth itself, or in the pad of decay. Again dry this out, and after applying warm air as before, flood the cavity with oil of cloves. After absorbing out the surplus with bibulous paper, apply hot air once more. Oil of cloves has the peculiar property, when heated to the point of volatility, of penetrating, and will pass deeply into the tubuli, and so embalm the substance of the pad that no fermentative action can occur.

"To prepare the cavity, grind the enamel well around to the full extent of the diameter of the cavity, that there should be no overhanging of any portion near the surface; then trim the extreme outer edge of the enamel surrounding the cavity to the outer bevel, or countersink similar to what

is made in flushing a screwhead in cabinet work, but not at so acute an angle. All this is done with small carborundum points. Next, perfectly polish the enamel borders. Use for this purpose points of hard wood, such as seasoned hickory and boxwood, sharpened like pencils, held in the porte polisher bits. By running the engine at a very rapid rate the enamel borders may be so polished that the mouth mirror shows them to shine and reflect light.

"This is not difficult nor painful, nor does it require much time, but it is very necessary to a perfect operation."

Gutta-Percha Cotton.

Cotton saturated with gutta-percha is spoken of favorably by Dr. Coucher in the *Journal of the British Dental Association*. He prepares same in the following way: A large piece of cotton is dipped in a solution of chloropercha and the chloroform evaporated. The remaining hard mass is cut in different sized pieces, which are used for various purposes, after they have been softened over the alcohol flame. If special softness is required, as over arsenic applications, warm the pieces and dip in chloroform. It also gives a close adaptation of matrices to the walls on cervical margins.

F. A. B.

To Remove Pulp Remnants.

Possibly no simple operation so tries the patience of the dentist and so unnerves the patient as the extraction of the small remnants of nerve which we find in the end of root canals, thoroughly alive and hard to reach. A small crystal of cocaine, carried on the point of a smooth nerve explorer that has been moistened in pure water, to the offending member, will deaden it sufficiently to allow its extraction with very little pain. A perfectly new broach, much smaller than the canal, facilitates the operation very much.

H. R. J.

society of Fort Wayne), and has twice been elected as president.

He is a strong advocate of dental associations and zealous in their behalf, believing that through these channels a dentist is better fitted for his profession.

Retaining Appliance.

A simple, easy and accurate method of making a stay appliance for holding two or three teeth that have been moved by regulating appliance, is to take an impression in modelling composition and run a model with Teague's impression material; then take very thin platinum, and, after annealing it, with a flat burnisher, adapt it well to the teeth, which can be easily and nicely accomplished with a little care. Next, trim up the platinum where you wish it to come, and while still on the model flow solder over the entire outer surface as thick as desired. After polishing you have a neat, close fitting appliance.

H. R. J.

A Good Law.

The legislature of Illinois has recently passed a law denying to retail druggists the right to sell cocaine, or any preparation containing cocaine, except upon a prescription given by a licensed dentist or physician. For a violation of this law a penalty, ranging from a fine of not less than ten dollars to imprisonment, is imposed.

This is, so far as we know, the first legislation enacted affecting the sale of this peculiar drug, and now it is in order for other States to follow suit.

J. A. C.

Youths' Companion Calendar.

The favorite of all papers for youths, the *Youths' Companion*, sends out a most beautiful calendar for 1898. It's an ornament for any home or office.

Now is the time to subscribe for the AMERICAN DENTAL WEEKLY.

S. B. HARTMAN, D.D.S.,

President of the Indiana State Dental Association

Dr. Hartman is a native of Indiana, and of Fort Wayne, his birthplace. He received his education from the public schools of his State, and the Fort Wayne Methodist Episcopal college, from which he received his literary degree.

In 1871 he became a student in dentistry with Seneca B. Brown, M.D., D.D.S., as his preceptor, and under whose instruction he remained for three years. Following this pupilage he entered the dental department of the University of Michigan, graduating in the class of '77, and in April of that year located in Fort Wayne, and the following June became a member of the Indiana State Dental Association, which membership has been continuous for nearly twenty-one years. At the thirty-ninth annual meeting of this Association, held at Fort Wayne, June 30th of this year, he was elected president.

Dr. Hartman is also a member of the Northern Indiana Dental Association, and the Isaac Knapp Dental Coterie (a local

THE American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

EDITORS AND PROPRIETORS:

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription \$2.00 per year; \$1.00 for six months—including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, December 9, 1897.

All Aboard for Dixie.

The indications point to the largest attendance upon the meeting of the Southern, at St. Augustine, in February, ever known in its history.

President Beadles is leaving no stone unturned to make it, not only a big meeting in point of attendance, but one of great interest and value to those who are so fortunate as to be present. And his efforts are being heartily seconded by his official staff.

February is not as pleasant as May, even in our latitude, and to our brethren of the North it is especially disagreeable. A good excuse to go South? Certainly! And meet with the Southern? That's the idea.

Now, in order that we may get you to come, and as an earnest of our sincerity, we make a suggestion as to how you may do this without placing a mortgage upon your worldly effects.

To induce travel South during the winter

season an individual can make the round trip at an excursion rate; but if a party of ten or more desire to come, the rate is even much cheaper.

But you know of no one besides yourself who wishes to come?

Send us your name and address on a postal. We will publish the list and assist you in meeting at some central point, as New York, when you can do the rest. This is your opportunity to see this "blasted country" of ours and enjoy a few object-lessons.

Let us hear from you at once and in large numbers? J. A. C.

Withhold Your Criticism.

Some are disposed to criticize the work done at Old Point Comfort. They should withhold their criticism and wait to see what twelve months will bring around. No organization can be perfected at its beginning. When the basic principle is correct, which in this case is union, minor details can be worked out later. Cavil does not build, but destroys.

Guides to the Entrance of Root-Canals.

A novel idea was suggested to form a funnel-shaped mouth to root-canals, by Dr. Austin Dunn, before the Chicago Dental Society and published in the *Dental Review*. This may not be an original idea, but it is the first time we have seen it in print. It is intended for those cases where decay has obliterated some of the walls of the cavity, leaving the openings to the canals in such contracted shape as to make it difficult to cause the point of the brooch to enter. He first places a matrix about the tooth. Wooden pegs are then stuck firmly into each canal, leaving the large, expanded ends sticking out above the cavity. The cavity is next filled with gutta-percha, pack-

ing in closely about the pegs. The matrix is now removed and the pegs withdrawn, leaving large, funnel-shaped openings to each canal, which greatly facilitates treating and filling the same. After the canals have been filled the gutta-percha may be removed and the cavity filled with such material as the case requires. H. H. J.

Perfumed Glycerine.

Glycerin possesses in a high degree the property of extracting the fragrance from flowers. Besides, it has proved to be excellent for the skin, as well as for the hair, so that it puts even olive-oil in the shade. *The Scientific American* says: If we take a vessel of best glycerine, putting into it lilacs, faded hyacinths, narcissus, lilies of the valley, violets, roses, lime flowers, jasmine flowers, etc., and leave them in it for three weeks, they will have given off their whole fragrance to the glycerine when taken out. In this manner a hair oil is obtained that cannot be surpassed by any Parisian "perfumer." Since glycerine can be mixed with water in any proportion (in contradistinction to the fat oils), a few drops may be poured into the water used for washing in order to perfume it delicately.

"American Dentistry," or "American Dentist," continues to have the same effect upon our foreign confrères as the proverbial red flag has for a bull. Wherever and whenever it pops up, it is the signal for an onslaught, and they, the aforesaid foreigners, fight it with almost religious fervor. This is intolerance of the rankest sort—a species of grossest ignorance that has no right to live except in "Darkest Africa."

We have no doubt but what there are frequent infractions of the law by "impostors" and "pretenders" who claim American proficiency, mode of practice, etc., and all such should be made to feel the strong arm of the law. But it is well

known to all that with the highest credentials one can possibly present to an English Examining board by an American, the applicant for license is not so much concerned as to his qualifications as to his ability to overcome the insane suspicion and jealousy and arrogant assumption of superiority of the Execution (?) board.

The eating and drinking of much meat and grog, with a foggy atmosphere for assimilation, are calculated to deaden the moral and intellectual faculties of any people. So, it may be, our English cousins are not to be censured after all for their fantastic performances. J. A. C.

National Association of Dental Technics.

The fifth annual meeting of the National School of Dental Technics will be held at the Palmer House, Chicago, December 29 and 30 of this year. Its program will entitle it to even greater success than experienced at any time during its previous years of existence. Its leading paper, from Dr. G. V. Black, on "Instrument Nomenclature, with Reference to Instrumentation," will mark a historical period in methods of teaching the manual of cavity preparation.

HENRY W. MORGAN, Pres.

D. M. CATTELL, Sec'y-Treas.

Duration of Vaccinal Immunity.

J. Jasiewicz (*British Medical Journal*) has gathered together some statistics which seem to show that the immunity from vaccination in infancy lasts a much shorter time than is commonly supposed. In the case of twenty-three children under six years of age, vaccination was successfully performed in seven, 35 per cent. Jasiewicz, therefore, recommends more frequent revaccination in childhood, and especially in early childhood. He believes that it protects from other infectious diseases as well as variola.

For Burns.

Dentists frequently have their hands burned, and to know a good remedy is essential. Poggi describes a treatment from which he has obtained excellent results in burns of any degree. The *Medical and Surgical Reporter* says: It consists in the use of potassium nitrate in the form of baths, compresses steeped in a saturated solution of this salt, or lotions. Potassium nitrate acts in burns as a refrigerant, for, on dissolving in water, it determines a marked lowering of the temperature of the liquid, amounting to as much as 3.5 deg. C. (6.3 deg. Fahr.). If a burn on the hand or foot is plunged into a basin of water to which a few teaspoonfuls of potassium nitrate have been added, the pain experienced by the patient rapidly ceases. After a while, the water is heated up, and the pain reappears, but it quickly subsides on the addition of another supply of potassium nitrate. This bath, when continued for two or three hours, frequently dispels the pain, and, it is said, may even prevent the production of phlyctenæ. The application of compresses steeped in a saturated solution of potassium nitrate exerts the same refrigerant and antiphlogistic action, the pain being alleviated thereby, and cicatrization of the wound taking place without difficulty. Professor Vergely, of Bordeaux, has obtained very favorable results in the treatment of burns of the first and second degrees by covering the affected parts with a thick layer of a paste prepared by mixing calcined magnesia with a certain quantity of water, leaving it to dry on the skin. In proportion as dried fragments become detached they are replaced by fresh paste. The pain ceases immediately after the application of the moist paste, it is stated; and under the protective layer of magnesia the wounds heal without leaving any trace of the cutaneous pigmentation which is so frequently observed after burns are exposed to the air.

A Student's Shade.

We took occasion, several years ago, before a meeting of the Georgia State Society, to urge the use of a student's shade while operating. After twenty-three years' active practice, fifteen of which we have worn a shade constantly, our sight is perfect, and from present indications it will be many a day before we shall be forced to the necessity of glasses.

The manifold advantages gained by the use of a shade are so very obvious, it is a matter of no little surprise that it has not been more generally adopted. At the chair the operator is exposed to a strong, concentrated light. During an operation frequent changes from the patient to the bracket causes an involuntary squint and contraction of the eyelids by reason of the light. These sudden transitions must, in time, make their impress upon and impair the sight. Leave out the question of imperfect vision, the shade brings out in relief the cavity and filling; and after several hours' continuous work, the muscles of the eye are less fatigued, with no burning sensation present or disposition to rub them.

There are other advantages to be derived from the shade, but we are not disposed to point them out. Experience has proven its value to us, and this acknowledgment is worth a thousand theories. The dentist, above every other class of specialists, should be jealous of his good eyesight, for the moment he begins the use of glasses he creates, unnecessarily, a suspicion of defective vision, and his failures—provided, of course, he ever has any—are invariably chargeable to this calamity. If we can induce you to give the shade a fair and thorough test, we have no doubt what the verdict will be.

J. A. C.

"A BASKET of patent medicines! What on earth have you got 'em for?"

"Ma's going to take 'em. She wants to get her picture in the papers."

Anesthetic Mortality in Germany.

According to Dr. Gurlt, of Berlin, the total number of patients anesthetized during 1895 and 1896 was 58,769, and of these 32 died, the proportion of deaths being therefore one in 1,836. The statistics for the last seven years comprise 327,599 cases of anesthetization with 134 deaths, or one death in 2,444. The proportion of deaths with pental was one in 230; with chloroform, one in 2,039; with Billroth's mixed method (morphin, chloroform, and alcohol), one in 3,807; with ether, one in 5,090; with ethyl bromid, one in 5,228; and with mixed ether and chloroform anesthesia, one in 7,594. Ether narcosis, as usual, was responsible for a certain number of cases of bronchitis and pneumonia. In addition, cases have been reported in which exanthemata followed the use of this anesthetic. Interesting as are all statistics bearing on the anesthetic death-rate in various countries, the practical value is reduced almost to zero by the absence of information bearing on the methods of administration in respect of each agent. Moreover, these figures appear to comprise only hospital cases, and they would doubtless have to be greatly modified were returns forthcoming of the mortality in private practice.—*Med. Press.*

Time of Eruption of First Teeth.

Dr. J. Lewis Smith kept records of the average time of appearance of the teeth in children at the outdoor department of Bellevue Hospital, excluding cases of rickets, which are most common in Italians, and next, in negroes. In 200 infants without signs of rickets the first tooth had appeared as follows: In three infants at two months, in 20 at five months, in 24 at six months, in 37 at seven months, in 28 at eight months, in 20 at nine months, in 14 at ten months, in 15 at eleven months of age. Yet Sir William Jenner had said that if a baby did not get its first teeth by the ninth month it indicated rickets.—*Med. Rec.*

Gelatine as a Hemostatic.

M. Carnot writes in the *Monde Medical* about his experience with gelatine, which was first used in 1896 by Dastre and Floresco. Five or ten grs. of gelatine are dissolved in 100 parts of water. This five or ten per cent. solution is then sterilized twice, raising its temperature to 212°. The mass has to be used at body temperature; if warmer its action is not as good.

M. Carnot used gelatine successfully where antipyrin or ferr. sesquichlorid did not act; he further on stopped varicose hemorrhages, such as of the rectum, with a 5 per cent. solution by means of irrigations. He was not successful in stopping hemorrhages of the stomach, because the juices of the same would destroy gelatine. Taken together, gelatine is to be recommended as a local hemostatic. It coagulates the blood quickly and favors the *prima intentio* of the healing of the wound. F. A. B.

Arsenious Acid Pure for Pulp Devitalizing.

Pure arsenious acid is the most convenient and safest form in which to use arsenic for devitalizing the pulps of teeth. In this form the arsenic is insoluble in water or the fluid of the mouth, or at least very nearly so, making it less liable to leak out of the cavity and get on the surrounding gum tissue. In most nerve "fibers" the arsenic is made into solutions in combination with other agents, and the "fiber" saturated with this solution. In this case the arsenic should be well sealed in the cavity. Pure arsenious acid seems to act more promptly for some reason. Possibly because the "fiber" is not always fresh or of sufficient strength.

H. R. J.

Canals should be moistened with cajiput oil before filling with chloro-percha, says Dr. A. H. Peek in *Dental Review*.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., DECEMBER 16, 1897.

NO. 14.

SOME PRACTICAL THOUGHTS.

BY DUNBAR ROY, A.B., M.D.,
Atlanta, Ga.

In this utilitarian age of progress it is absolutely necessary for the working man to be in full possession of all his faculties. The man who has one leg cannot race with the one who has two, nor can the physically disabled cope with those of a herculean constitution. Of all the special senses possessed by man none is so valuable as that of sight. When this is injured or destroyed, ninety-nine one-hundredths of our capability of making a living are taken from us. The "horny-handed sons of toil" live by the sweat of their brow, but none the less commendable is the mental strain exerted by the professional man in order to accomplish the same ends in life. The life-work of a dentist might well be looked upon as consisting of the labors of the hands and the eyes, both governed by the supreme ruler of our bodies, the mind.

My object in this short paper is to urge upon dentists the proper care and the proper use of their eyes. Many a man often has an ocular defect of which he knows nothing, because, in his ignorance, he has never given the subject a thought. How many men do you suppose have ever tested their eyes to see if the vision is the same in both? Probably very few, unless some special symptom has necessitated his consulting an oculist. Many a patient has been examined by me, and one eye found

almost totally blind, who never dreamed that such was the case. In the same manner a person may be deaf in one ear while the other remains perfect, yet such may go for years without ever discovering the fact. Why is this? Simply that one eye and one ear do all the work, and the fact may never be known otherwise unless the good member should begin to fail. Few people ever stop to consider the value of good sight, if we may judge by the careless manner in which they use their visual members. "A stitch in time saves nine" is a trite saying and very *apropos* on this subject. As long as the eyes are strong and give us no feeling of discomfort we never give them a thought as to the manner of their use. We never consider the character nor the source of illumination so long as we are able to see that for which we are looking. Some people use their eyes with a constant glare in front of them; some have to hold their work close to their eyes, because the illumination is so bad; others use their eyes in the street-cars or the steam-cars when the print is jumping around with panoramic precision, and when these same people begin to have aching and burning eyes, with dimness of vision, they wonder why in the world their eyes should be growing weak! People never appreciate the blessings in life until they are gone. Even now Mr. Rouss, of New York, offers a million dollars to the person who will restore his vision. There are many eye troubles which are due to injudicious living, especially in early manhood, when we are supposed to "sow our wild oats." Diseases

of the eye may be broadly divided into two general classes:

1. Those due to organic changes in the eye itself or its appendages

2. Those of a nervous origin or reflex from disturbances in other parts of the body.

Organic changes do not give near the amount of trouble as those under the second class. When persons have an inflamed eye or an injured eye they immediately consult an oculist and have the trouble removed. With functional disturbances it is different. The trouble is slight and the discomforting symptoms, after a good night's rest, pass away. It is only temporary and we will let it rack along until it gives us more discomfort than the present. We stay out late at night partaking of indigestible viands, take a little wine, and the next morning we wonder why our eyes look red and feel so burning and heavy. Preventive medicine is just beginning to see the light of a new era. It is producing and will produce yet more mighty changes in our efforts to make the physical condition of man more perfect. Ward off disease and not wait and try to combat it, should be the aim of every physician, and likewise every dentist. This doctrine should be preached in the home of every family. Delay is often dangerous. How many people wait until it is too late before they consult the dentist! How many teeth could be saved if they were only treated in time! I have long ago held that people should make yearly visits to their dentist as religiously as the eastern devotees seek their hallowed Mecca.

Prevent disease, prevent eye troubles, prevent loss of teeth, by attending to the physiological functions of the whole body! All functions of our body are dependent upon each other. When one becomes disordered the whole human frame is made to feel the effect. Disordered stomachs affect the teeth, bad teeth cause neuralgias and

ear-aches, neuralgias shatter the nervous system, and so it goes from one to the other, until *font originis* is beyond recognition. Some of the worst pains in the eye I have ever seen came from a defective tooth. Yet on the other hand I have known teeth to be extracted by reputable dentists when wax accumulated in the ear was the sole cause of the trouble. Dentists and physicians should be men far removed from the "one idea" type. Their knowledge should be of the broadest nature. Never cease to try and learn, and remember that we can often learn from the humblest peasant what books fail to teach.

HOW TO INCREASE INTEREST IN DENTAL SOCIETIES.

It has long ceased to be a question both with the profession and the patronizing public whether dental societies redound to the good or evil of both. There might have been times when both State and local societies were condemned by some dentists as cliques organized to raise and control the price of dentistry and thereby arouse the sympathy of the public against such organizations. But since patrons are beginning to think and observe, and to appreciate more fully those gifts of nature which add so much to their health, beauty and comfort, they are naturally led to consider what means are presented whereby dentists are better fitted to most successfully accomplish their desired object, namely—to restore as far as possible to a normal condition those useful ornaments with which nature has endowed us, and without which life itself would lose some of its charms. Nor would it be doing the profession at large credit to say that while it is true that only about one-fifth, or possibly less, of their number are members of some organized dental society, that this proportion only is in sympathy with the ideas of progress promulgated by dental societies. As an evi-

dence of this fact we refer to the indifferent manner in which the circular opposing the enactment of a new dental law in Georgia was received by the profession not belonging to any society, which was sent out by an "advertising quack," claiming that four-fifths of the dentists in Georgia, who were not members of the society, were in sympathy with his views on the subject.

A great many dentists, whose names are not enrolled among the membership of some society, are in hearty sympathy with every move and object of these organizations; and yet for some reason from year to year they fail to identify themselves with some society. The question as to how to get at and persuade such men to "come over and help us," has puzzled the brain of every president and executive committee who have ever served a society in either capacity; and you will find many enthusiasts, like the writer, who are so anxious to see the profession ever on the progressive move, who are always ready to offer some suggestion as to how is best, or probably it would be better to say, how it is possible to arouse the lukewarm and secure their presence and aid at the annual meetings of at least their State society.

Heretofore State societies have been too exclusive; that is, in regarding their own membership as the only dentists in the State, and looking on all outsiders as their antagonists, excluding their proceedings and literature as far as possible from those not holding membership.

The plan we would suggest would be to wipe out such narrow views, and extend the power and influence of societies beyond the number of its annual attendance; thereby increasing the numerical force that is to battle against that small element of the profession who really antagonize the ethics and efforts of State societies.

Let each State society so extend its classification of membership as to embrace among its members that class of dentists

who are ethical in their practice and are in harmony with every society move, but who, for some cause beyond their control, or for some reason good to themselves, are prevented from attending meetings. Let them receive copies of each annual meeting, and request them, from time to time, to write articles for the society; place them on committees for this purpose, and in every way possible make them to feel that they are "one of us."

It does seem that societies have too long been "casting pearls before swine" by trying to persuade the advertising, unethical dentist to quit the error of his ways and enlist with us. There is no man starting in the practice of dentistry at this age who is not well informed as to what constitutes the elements of an ethical gentleman; and this fact proves beyond question that his conduct to the contrary is wilful and antagonistic to the rules and regulations of all societies. Such men should be excluded from professional recognition, and they would soon be regarded in like manner by the general public.

Now, to place the first class of dentists, not members of societies with the latter, you see clearly would be a great injustice, and it does seem that our efforts would be more worthily bestowed on the former than the latter.

It has been suggested that if some dentists were supplied with the literary fruits and practical points suggested at society meetings they would not care to attend. Is it not equally true that many are not situated so that they can always attend, who are just as desirous of the success of the society as those who attend regularly? At all events the indifferent dentist must be brought over by both persuasion and education, and there can be no better method of accomplishing this than by extending to him such professional courtesies.

As for the advertising, migratory, unethical dentist, he is fit only to serve as a mile-post or sign-board to point out to beginners the road that leads to professional ruin.

H. R. JEWETT.

COMBINATION FILLINGS OF CEMENT AND GOLD.

The following article on this subject is one of the best ever printed. We take pleasure in quoting from Dr. S. Palmer in the *Ohio Dental Journal*, as follows:

"This subject has been introduced to the profession for several years past, and still there remains enough in its favor untold to be of interest to the younger operators. I have made it quite a study and will add my conclusions, with directions in detail, which, if followed closely, will enable any one to obtain uniform and positive results. Success with me lies in the preparation of the gold used. Out of the many preparations on the market, some of which may be equally as well adapted to other conditions, none other could take the place and meet the demand for Watts' crystal gold, No. 1—"old form." To meet other requirements, this gold is now put up in "strips, cubes, sliced," and the old form, a single cake sliced; crystal gold being cut from a cake. For the filling under consideration, it is far better to cut from the cake as needed. A slice of any thickness can be cut from the end of a cake with a razor or any blade equally sharp, without condensing in the least. And in like manner the slices can be cut in squares, oblongs, etc., as best adapted to the cavity.

Leaving the gold for the present, we will consider three forms of cavities, and no more in this connection.

First, very shallow, buccal or labial. I find some barely through the enamel, so that on the oral teeth the bottom of the cavity is convex, like the original form of the enamel; such cavities need not be deeper than a visiting card. Let the margins be at right angle or slightly undercut, no matter what form the bottom of cavity is after decay is removed.

As the same principles are involved in filling the other cavities to be mentioned, let us finish filling the first.

The cement should be such as is best for crown setting. The mix should be somewhat thinner, and be carried to the cavity upon the point of the spatula or a thin-pointed instrument. The gold slice for the first layer should be about the thickness of a dime, and cut to more than cover the cavity, and be annealed on mica or metal, at a low red heat.

The instruments used have much to do with the success of this work. They should be light shanked, oval-faced, and finely serrated. It is not necessary to procure a new set, as some good ones can be made by grinding to size the flat oval ends of plug finishing files, those of slender shanks, using lateral pressure; for direct pressure, ordinary instruments answer. I find that hand pressure is most reliable throughout.

Having prepared the cavity and protected it against moisture, coat the surface with cement; remove surplus, if any, with the point of a stick or otherwise; cover the orifice with the gold and gently press it down in the center, working towards the margin, so as to force out the cement; wait two or three minutes and remove the up-turned overlapping gold, which has served the purpose of preventing the cement from contact with the gold lining. Clean the enamel border from gold and cement, and apply another layer of gold, which may be as thick as a small penny; condense as before. On reaching the enamel, turn the overlap in, and condense to fill the depression at enamel border; possibly an addition of gold may be needed. The foundation is ready for filling with foil, or finish with the same.

If foil is used, let it be in flat folds of not more than four layers of foil. Fillings of this kind show no dark line around the border, and do not drop out.

Cavity No. 2. Located in any position where it seems desirable to use cement for a part of the filling, or to use the gold as a facing and protection to cement. This com-

bination embodies two opposing principles, which greatly annoy operators of little experience. First, gold to adhere to cement must come in contact while the cement is sticky; second, cement is not a firm foundation for gold, unless there is adhesion.

Instructions are given to introduce the cement, and before it hardens pack the gold and wait for hardening. I have been unable to get a good gold foundation; some of the cement usually covers or becomes mixed with the gold, so that there is not as much cohesive surface between the gold foundation and the filling proper. Fill the cavity with cement, as would be done for an entire plug, remove surplus and shape the surface of cement to meet requirements. By this time the filling will have hardened, so as not to flow under pressure. Make the second mix as described for No. 1, and conduct the operation as already described. Any gold may be used to finish.

No. 3 represents a cavity that has been filled with cement, which from wear or for a more permanent filling gold is desired. Prepare the cavity by leaving such portions of the cement as may be covered with gold. Experience teaches that cement does not adhere closely to an old filling, also that there is not much adhesion between gold and hardened cement. To harmonize this difficulty, cover the foundation with a thin mix, upon which anchor the gold, as already described, and complete the plug with foil. It is surprising how thin cement penetrates the crystal gold, also how firm by the gold is cemented to the dentin. Seeing is most convincing. Take a piece of ivory or bone, file a surface flat, paint it with cement and press upon it a layer of gold, and see what a beautiful surface the gold has, and how firmly it adheres to the bone. By this means one can see just how thin the layer of gold is. Take a slice as thick as a dime and press one-half, leaving the other, and it will be found that the packed gold will not be much thicker than paper. Trusting that some reader may be aided by following the above instructions, I leave it for trial.

SADDLE-PLATES.

The following method for constructing "saddle-plates" is given by H. B. Cressman in the *Penn Dental Journal*:

The saddle-plate, which rests on the alveolar ridge, is supplanting the fixed bridge, and many times the removable one for cases where one, two, or three teeth are needed in the artificial denture.

As it is being used extensively, it may be interesting for some to learn how it is made.

The base-plate can be made of one piece of heavy sheet gold, but better by using two pieces of No. 26 gold, swedged and soldered together, which gives a much stiffer plate. Clasps are next fitted on the anterior and posterior proximal teeth. These clasps are made of platinum gold, about No. 28, cut from one-eighth inch to five-thirty-seconds inch in width, and fitted around the middle third of the tooth, so that the clasp need not be cut away at any point to escape the occluding tooth. The clasp is allowed to run around the tooth on either side, so that there is a space between the ends of an eighth of an inch; on the anterior teeth the clasp does not extend so far around on the labial surface. The clasps and plate are next placed in position in the mouth and an impression taken with plaster. A mixture of plaster and sand is run into this impression, and on removal of the impression the clasps are then in position to be soldered to the plate, half-round gold wire of about one-eighth inch or a little less in width being used to connect them. This is soldered to the clasp where there is less spring needed, generally on the labial side, where it will not annoy the tongue.

To prevent the plate from sinking deeply into the tissues, a small depression is cut in the enamel of the two teeth, between the cusps on the disto-occlusal angle of the anterior tooth and the mesio-occlusal angle of the posterior one. This depression is cut

deep enough to receive a piece of the same clasp metal, three-thirty-seconds of an inch wide, extending about one-eighth inch on the occluding surface of the tooth and bent at right angles, so that the other end can be attached to the clasp or the plate at the side of the tooth. When one tooth is to be put on a plate, an English one is preferable, as a much better result is obtained, but if more teeth are to be placed on it, it is better to vulcanize them upon the plate.

Jacket Crown with Bonwill Facing.

The following very practical suggestion is from Dr. C. J. Hand, in the *Ohio Dental Journal*:

In crowning badly broken down teeth, or where devitalizing the pulp is not expedient, or is objected to by the patient, as in short laterals or denuded teeth, I have found the following a very good plan: After trimming, so that band can be *accurately* fitted, make a band of *thin* platinum, to cover all exposed portions of tooth, and solder with pure gold. (Of course it is supposed that the labial wall has been beveled as much as possible, to permit the facing being brought in line with the adjoining teeth.) Instead of using a thin facing, secure a Bonwill crown, one that will nicely fit the space, and grind out the lingual portion, leaving the sides intact. Grind until the tooth can be placed over the platinum cap in proper position. It can now be waxed to the cap, invested, and body added to restore form, or better still, a little body mixed thin and placed on the porcelain and platinum cap, gradually raising the heat until fused. This method not only saves time, but prevents the investment absorbing the water in body and causing a porous bake. The crown is much better than a facing, as it prevents the difference in color at sides, which it is almost impossible to prevent when body is added to a facing. If care has been used, the crown will go to place accurately and present a very natural appearance.

Cement-Lined Amalgam Fillings.

A very practical way of introducing the cement into the cavity, and other details of this combination filling, Dr. F. W. Knowlton details as follows in the *Ohio Dental Journal*:

The cavity is prepared in the usual manner, not depending wholly on the cement for holding the filling in place when there is any strain on the filling during mastication. If the cavity comes in close proximity with the pulp, a thin piece of asbestos paper cut the proper size and one side covered with an antiseptic varnish, should be placed over the pulp, the varnish holding the paper in position and assisting to protect the pulp from any deleterious influence the cement might have on it. Place the powder and liquid on the glass slab and roll a small pellet of cotton very tight so there will be no loose shreds of cotton remaining. Mix the amalgam as usual and wafer a portion of it. Now mix the cement a trifle thinner than for a cement filling and place a small portion in the cavity with the spatula and taking the previously prepared pellet of cotton in the pliers spread the cement against the wall of the cavity with a single pressure; if done quickly it will cover the cavity nicely and not stick to the cotton. Now place some of the amalgam in the cavity and with ball burnisher work the amalgam into the cement, at the same time working surplus cement to the margins of the cavity, when it must be thoroughly removed with excavators so there will not be a particle of cement left exposed when the filling is completed. Fill the remainder of the cavity with the wafered amalgam and finish as if it were an ordinary amalgam filling.

Don't forget to send THE AMERICAN DENTAL WEEKLY those practical dots from your laboratory and operating-room. Make our columns a weekly exchange of good useful items.

Toothache Caused by Intermittent Fever.

A gentleman called at the office of Dr. Ronai, Buda-Pest, Hungary, to have several teeth treated. During the operation patient complained of acute pain in the second right lower molar, a tooth whose pulp had been devitalized by the operator five years ago and the root-canals and cavity properly filled.

On examination the doctor found the molar sensitive to touch, but the filling intact. He diagnosed periostitis and ordered applications of iodine. Patient felt perfect relief the following day, but on the third day the pain set in again. Repeated applications of iodine had the same result, pain coming back exactly every third day and keeping on about six hours.

Dr. Ronai now concluded that this case was a particular kind of *febris intermittens*. He dosed patient on quinine and relieved him permanently. — *Zahnärztliche Rundschau*.

Solution for Removing Nitrate of Silver Spots.

R. Bichloride of mercury,
Muriat. of ammon. aa. grm. 5.0
Aq. dest. grm. 40.0
M. Sig. Apply the mixture to the spots with a cloth, then rub.

This removes almost instantaneously even ancient stains on linen, cotton or wool. Skin stains thus treated become whitish-yellow and soon disappear. — *Med. Bulletin*.

Operated on the Heart.

The *Atlantic Medical Weekly* says that Dr. Rehe, of Frankfort, recently operated for a lacerated wound of the heart from knife stab of the right ventricle, sewing up the wound while the heart thumped violently. The patient was before the recent Berlin Surgical Congress.

Nothing New.

The above remark is often heard and often misapplied. But to judge from an article on ancient patents in a German paper, one is prone to ask, what is new? Many British patents were granted in sixteen hundred—such as making steel, self-winding clock, light-houses, water saw-mills, repeating-rifle, converting salt water into palatable drinking-water, catching fish by aid of lamp, burglar alarm, making starch, chemical fire extinguisher, motor carriage, street sweeper, making sheet tin, etc. There are some novelties in our patent office; one is a coffin for burying those seemingly dead, but who may revive. A string is attached to one of the great toes of the *corpse* and a sliding-lid over the face; from this opening in the coffin a pipe projects out of the ground. If the buried returns to life, naturally the foot would move, which would uncover the face and allow air to enter and the “bark from the tomb.”

The Price of Aluminum.

The present price of aluminum is as follows: Ingots 99 per cent. pure, 40 cents per pound in small lots. That which is 90 per cent pure is 35 cents per pound. Special casting alloy, to be used in the place of brass, 80 per cent. pure, 27 cents per pound. Finely powdered aluminum for paint, etc., is \$1.75 per pound. The metal is now so cheap that it is used largely as a substitute for brass.

Says Howdy Privately.

We quote from a letter as follows: “As editor of the *Stomatological Gazette*, I am in regular receipt of THE AMERICAN DENTAL WEEKLY, and should very much regret to have the case otherwise. Your publication is always welcome, bright and up-to date.

FRANK L. PLATT.”

San Francisco, Cal.

use. Also cut down corks to cones, glue on pumice or corundum stone. A very coarse English corundum stone makes one of the best coarse polishers. Keep your corundum wheels out of the hot sun. Dr. C. H. Land, of Detroit, once told me that he found heavy pasteboard made a capital vulcanizer packing, and that where vulcanizers leak, dusting on corn-starch will stop it. When you use alcohol to cut or sharpen a corundum wheel, do not attempt to use the wheel until it is absolutely dry. To keep your solder in place, add a little gum arabic to your flux, and rub with the borax and water on the slate. To make sticky wax for holding clasps in place, use resin two parts, beeswax one.

Handling the Nerve Broach.

Many operators make small handles for broaches, of either gutta-percha or wax, claiming facility in handling the broach. It is much better not to add to the size of the shank of the broach. There is a delicacy of touch necessary in entangling the nerve in the broach which is destroyed by enlarging the shank of the instrument. With the small instrument between the fingers, the slightest resistance to the twisting motion of the broach can be distinctly felt. There is just a tightness to determine when to pull. If it is carried beyond this, there is danger of cutting the fibers into pieces, making the removal of the little organ whole a difficult matter.

Pluggar Point is the name of a new college journal. It is edited by members of the senior class of the dental department Southern Medical College, and is an exceedingly creditable effort for the first. Such journals seem to be the rage at present. They do good in many ways. They familiarize the students with journalistic work, and teach them the importance of professional current literature. Success to all college journals.

J. L. CRATER, D.D.S.,

ORANGE, N. J.

President of the New Jersey State Dental Association.

Practical Hints.

Some ingenious fellow, styling himself "Lazy Man," writing in the *Dominion Dental Journal*, says:

Wash amalgam with a few drops of sulfuric acid added to water. For sterilizing instruments, boil them for five minutes in a one-per-cent solution of carbonate of soda. It will preserve them from oxidation, as well as make them aseptic. Do not use spunk for drying cavities unless you are sure it leaves no debris behind. Do use it often instead of the rubber dam. It is handy on the tweezers as a conveyer for large amalgam filling in posterior cavities. Very useful, too, to smooth off ends of filling. Oxyphosphate is the best thing with which to repair broken teeth of plaster models, if you can wait an hour till it sets. Cut strips of the various grades of sandpaper you use with the split mandrel of your lathe. Fit them in tight. Slip them off. Glue them, lay aside for

THE
American Dental Weekly
 ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Subscription **\$2.00** per year; **\$1.00** for six months—including Canada and Mexico; other countries **\$3.00** per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, December 16, 1897.

A Suggestion to Our Medical Contemporaries.

Would it not be well for the American Medical Association, at its next meeting, to memorialize Congress to enact a law requiring all patent medicine makers to print on the labels of the bottles the formulas of their production. Millions of dollars are taken from a credulous public every year by these humbugs. Other countries so protect their people, why not the United States of America? We know that a mighty howl would go up from these wolves in sheep's clothing, and that they would lobby Congress with their millions, but the medical profession is mightier than they. True, some of the congressmen whose pictures disgrace the pages of our large dailies, advocating these nostrums, would hesitate to enact such a law, but there are enough self respecting men in that body to pass such a bill. It would be well for each State

Medical Association to send up such a memorial. Let the medical journals take hold of this matter and push it forward.

The Present Situation.

In reviewing the events of the year now about to close, the *International Dental Journal* seems to take rather a dissatisfied view of the past and present situation.

It was a wise injunction uttered by our *chief editor* in the last issue of this journal, to withhold criticism until the new organization can be perfected and put in working order. Considerable dissatisfaction is beginning to show itself on account of the disorganization of the American, while the Southern was allowed to retain its organization and move on with courage undaunted as if nothing had ever happened to disturb its equilibrium. The *International* says the result of the final action at Old Point Comfort was to leave the matter practically as it was prior to that event. We could not help noticing this same feeling of distrust and dissatisfaction pervading the mild criticism of President Beadles' enthusiastic circular letter. Indeed the last line of this criticism places this distrustful spirit beyond the shadow of a doubt, when it says, "Did the Southern really unite with the American Dental Association to form a new body?" Now, we do not desire to enter into any controversy in this matter that might bring about any more violent ebullitions than at present exist. We would rather heed the words of our *chief editor*, but we cannot refrain from saying that whatever may be the present situation or future result, it was brought about by a proposition made by the American and accepted by the Southern.

If the enthusiasm which is manifesting itself to insure a successful meeting in February has been the cause of this feeling, we are at a loss to understand why. A successful meeting will in no way prevent the Southern complying with every promise

and agreement entered into with the American at Old Point Comfort. The editorial says, "Thus under the old name is this announcement made, and to all appearances it is the same in fact." To be sure it is the same Southern as it always was, except it is now a branch of the National. The same members compose it as always composed it, and the same familiar faces will be seen at its meetings just as before, but this will not prevent their paying all allegiance due the National as its supreme organization. We believe the fears entertained are without due foundation; that progress has been made, or, at least, a basis for progress.

We believe that other changes will be necessary to perfect the organization. The American could just as well have existed as a branch. The National could have been a supreme body for both. We believe that to perfect this arrangement every State society ought to be a branch of this National body and pay so much per capita into its treasury. We cannot pursue this thought further here, as it is an extremely deep and intricate question. What has been said is only to try to show that the movement made is on the right line, but rests in an unfinished condition. When organization is completed, ebullition will cease, and harmony will prevail as never before.

Criticism should cease, differences should be adjusted, and enmity and ill will should be reconciled, where a corresponding disposition is manifested in the opposite faction.

H. H. JOHNSON.

"First Person, I Do."

We do not wish to appear as a "fault-finder," but must be allowed to remark on the too liberal use of the *personal* pronoun in articles describing certain methods of procedure.

However valuable and interesting an article may prove, the effect is greatly marred by the frequent interjection of the personal pronoun.

The fault is such a common one with writers and talkers, it resolves itself into a habit, rather than from motives of pedantry.

These remarks are called forth from reading an article that is going the rounds of the press, which, while somewhat original and quite interesting, is frequently punctuated with a large "I." To emphasize our meaning, we quote three lines—italics ours:

"Running *my* engine at a rapid speed, *I* polish the beveled enamel borders of *my* cavity until *my* mouth-mirror shows *me* that they shine and reflect light."

Suppose a surgeon, describing his method of operating in a case of appendicitis, were to say :

Taking *my* knife into *my* right hand, *I* made an incision in *my* abdomen just over *my* appendix; laying bare *my* appendix *I* seized *my* appendix with *my* left hand, cutting it off with *my* right. *I* then removed all septic matter as well as *I* could with *my* antiseptic solutions. *I* dressed *my* wound with *my* iodoform gauze, instructing *my* patient to observe perfect rest and sedation, etc., etc.

This would be ludicrous, not to say repulsive, and, we trust, points its own moral.

J. A. C.

Cataphoresis in Riggs' Disease.

Experiments in treating this disease cataphorically have been going on from time to time, and while we are not yet able to see wherein the treatment is more beneficial in this particular disease than simply the local applications by syringe and otherwise, yet there are those who profess great results. A writer in the *Dental Cosmos* says that with suitably shaped platinum points, and after all the deposits around the teeth are removed (which is usually sufficient to make a cure, in connection with antiseptic mouth washes), cotton is saturated with the following:

R Euthymol. min. xxx.
Iodine. min. iii.

is passed to the bottom of the pockets and the platinum point is placed in the pocket, the current turned gently on and increased to sufficient force for twenty minutes. Six teeth are operated on at a time. By the use of napkins the parts are kept dry.

The question here is, what is the good of cataphoresis in such cases? Theoretically, it is not proven beneficial. Practically, there is no virtue in it for treating Riggs' disease. Medicaments can be applied more satisfactorily with cotton swabs, or better by a small spray apparatus. The latter method is the true way to medicate the pockets of this disease.

Dr. Dunbar Roy, a noted eye, ear and throat specialist of this city, is now one of the managing editors of the *Atlanta Medical and Surgical Journal*. We have the pleasure of presenting in this issue of the AMERICAN DENTAL WEEKLY an article by him of practical importance. Other articles by him will follow, treating practically the visual organs with reference to care, strain, light, etc., all of great importance to the dental surgeon. There is no sense of half so much importance to dentists as that of sight. We cannot be too careful about our eyes and the proper use of them.

Varnish for Cavities.

Gum copal dissolved in equal parts of alcohol and chloroform to the consistency of thick cream, to which is added, in equal bulk, a 25 per cent. alcoholic solution of hydronaphthol, makes a thin varnish that is adhesive, powerfully antiseptic, non-irritating, etc. Its value will suggest itself.

A. M. R.

To Attach Reliefs to Model.

Some one suggests the use of shellac varnish for holding the lead reliefs on models. The writer says they will not move.

Tinning a Model.

There are some features in the following process for tinning a model, by R. W. Waddell, in the *Penn Dental Journal*, that seem new. He says:

"A sheet of number thirty tin is placed over the cast, and with the index-finger of the left hand is pressed down into the arch, while with the stencil brush, held in the right hand, it is worked down over the ridge and all around the model. Then, by gently tapping with the stencil brush, it can be swedged around the air-chamber very closely without tearing. Care should be taken to have as few wrinkles as possible, but those which are sure to get in can be easily burnished out, being careful not to burnish hard enough to destroy the rugæ. The tin should extend far enough down for its edges to be caught in the plaster of the investment, both around the sides and at the back, as this will assist in holding it on when the parts of the flask are separated. After it has been carefully burnished, it should then be removed and the model coated with thick shellac. The tin is then replaced, and it will be noticed that it can then be burnished much smoother than before."

Chloro-Rubber.

When packing a case, there is nothing better than a chloroform solution of the rubber base, to be applied to the model. The pieces of rubber can thus be made to stick where they are placed, and the packing can be done almost to the nicety of wax. Keep the chloro-rubber in a metal screw cap bottle, such as come with some of the cements.

Science is a first-rate piece of furniture for a man's upper chamber if he has common sense on the ground floor; but if a man has not got plenty of good common sense, the more science he has the worse for his patient.—*Oliver Wendell Holmes.*

To Keep Flasks Clean.

Remove plaster from flasks, dry thoroughly, wipe out with a swab wet with kerosene oil, and see if you are not well pleased with your experiment. By doing this, flasks are easily freed from plaster and will never rust; besides this, time is saved, which is or should be money to the busy dentist.

H. C. HOPKINS, D.D.S.

To Make Ferrules for Handles.

With a Morrison crown apparatus and some stencil-cutter's sheet-brass, ferrules for tool handles can be quickly made. The handle should be bored to receive the shank of the tool, the ferrule placed on and the tool driven through the cap of the ferrule. Cheap sewing-thimbles make good ferrules.

Slowly the medical profession is erecting monuments to its great men. To McDowell one was built a few years ago. Now Samuel D. Gross has one. Men of achievement in science should be so honored, and the work should be more promptly and generously done. Chapin Harris should have had a monument of marble or bronze to his memory long ago.

To Cut Rubber Dam.

To cut rubber dam with scissors, fold to four or five thicknesses and cut the roll as thus formed. By this means you can easily and quickly cut a piece of dam with scissors that it would be impossible to cut a single piece with.

H. C. HOPKINS, D.D.S.

LITTLE Bessie's mamma wished her to learn to go to sleep without having a light in her room. "You see all those pretty stars out there," said her mamma, "they are not afraid in the dark." "Well!" said the little girl, "they have the electric lights."—*Health Magazine*.

Sources of Platinum.

Platinum is mined mainly in the Ural mountains, Russia. Its gain has increased from 5,892 pounds in 1880 to 8,826 in 1896, and the price per pound is about \$37. Iridium always accompanies platinum, but in very small quantities; last year's production of it was only 8½ pounds.

New South Wales, Australia, furnished a pretty large quantity in the last years. About \$17,000 worth of platinum was put on the market from that country in 1896.

—*Zahnärztliche Rundschau*.

Bath for Gold Work.

As a bath for gold work Dr. Sitherwood uses alcohol instead of sulph. acid, and gets same results without the objectionable features of acid.

Would you like to take your dental literature in small, palatable doses, the better to digest it? Then send us one dollar for six months' subscription to THE AMERICAN DENTAL WEEKLY. If you haven't the dollar, send us an item on a postal and help us to make the WEEKLY what we wish it—the best dental medium in America?

The following has been suggested by a dental student as a good sign to hang in a dental infirmary: "We spare no pains to make our operations satisfactory."

A bicycle pump is made to operate automatically by the running of the machine. It can be thrown in or out of use instantly by the rider.

Add some spirits of turpentine to the water to get rid of the smell of iodoform from hands and instruments.—*Progrès Médicale*.

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THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., DECEMBER 23, 1897.

NO. 15.

NATIONAL ASSOCIATION DENTAL EXAMINERS ALL RIGHT.

We note there is a disposition, indeed a great effort on the part of some of the dental publications to raise war on the National Association of Dental Examiners. It comes in the form of open letters and editorials and emanates principally from some dental colleges. Some of them not content with assaulting this association, go beyond and dispute the utility of Examining Boards. Of course such attacks can only end in controversy, if the other side is inclined to take the matter up, and in naught, if the assailers are left to have their fight to themselves. I do not think it necessary (in the light before us of an educational standard, raised within the past few years to three full courses in a dental college) to defend dental examining boards. It seems to me they need no defense no more than does a court of justice. Boards may make mistakes, and they would be queer things if they did not, but that is no argument against the genius of the system.

The Boards of Dental Examiners of the several States are created by the legislatures of their respective States, and have behind them statute laws which make them legal and their acts binding so long as they do not go beyond the authority delegated them in the statute.

It has been argued that some of the provisions in these statutes are unconstitutional and cannot be enforced. However that may

be, they are of full force and binding until they shall have been declared unconstitutional by the courts having jurisdiction. These State laws then are what the State Boards stand on, and are a pretty good foundation.

The National Association of Dental Examiners is a social organization, having for its object the advancement of dental education, thereby promoting the prestige and usefulness of the dental profession. It has behind it no law. It can enforce nothing except in so far as its influence as an organization can reach. It cannot grant, revise nor withhold a license to practice anywhere. It cannot compel any dental college to accede to its demands nor abide by its rules. It cannot compel any State board to affiliate with its workings nor support its organization. It does not seek to do these things in any other way than by its influence as a social organization.

This association was organized when most of the dental colleges in the land were working, not so much for the advancement of dental science as for the aggrandizement of the wealth of their promoters (and who can say this is not largely the case today); at a time when the leading dental colleges, disgusted with what was called education in some institutions, formed themselves into an "Association of Dental College Faculties" for the purpose of elevating the curricula of dental colleges, etc. It has from time to time passed such resolutions and made such recommendations as in the judgment of its members were condu-

cive to the improvement of the educational standard. Chief among those, and the one that has called upon it the indignation of some colleges, was the establishment of a list of the colleges it recognized as being up to the standard, and the making of certain rules it deemed necessary in order to obtain information concerning the equipment and character of colleges.

Now we arrive at the point at issue. Certainly no person will dispute the right of this association to say what colleges it recognizes as being up to the standard. If any college does not care to be on the list, there is no power to force them to go on it, and no disposition of any one to dictate their policy. If it is of no value to any college to be on the list recognized by this association, it is certainly its privilege not to be enlisted. If the moral force of being enlisted is of no value; if the opinion of this association with regard to the proficiency of a college is of no moment; if the character of a college is not strengthened under the indorsement of this association, then is its organization worthless and its efforts without avail.

You have seen some of the brightest pens in all our country spend pages to try to disprove the legal standing of this association, when it never claimed any, nor sought to obtain it; but simply stands on its confidence in its strength as a social organization sustained by the moral force of the individual boards which compose it, and they by the force of the *personnel* of their members and the commission they have received at the hands of the people.

The list referred to contains nearly all of the dental colleges in the United States, and the great majority of them are in good fellowship with the National Association of Dental Examiners. They are up to the standard, they are recognized, they are satisfied, they are friendly to the policy of the association; they offer no obstruction, but rather assist in giving the association any

information concerning their equipment and policy. On the other hand, the association would not take away one iota of the prestige of any college, but will rejoice to see it advanced.

It has furnished the colleges a list of rules for the compliance of those which wish to be enlisted and those which wish to remain on the list recognized. These rules are reasonable and not beyond the compliance of any up-to-date dental college.

Now the dental colleges are here to stay; the Association of College Faculties is a permanent organization; the National Association of Dental Examiners is on the ground with every evidence that it will be here when succeeding generations shall furnish the men who will compose it.

Let's drop all controversy and live like brothers. Let the colleges educate dentists for the country. Let the National Association of Dental Examiners refuse to keep company with any college which graduates dentists lower than does its colleagues; but all join in the great and common cause of upholding the dignity of the dental profession.

D. D. ATKINSON.

A Good Example.

Dr. Taft, of the Dental Department of the University of Michigan, annually presents to the senior class of that school the Dental Code of Ethics and urges each member of the class to sign it.

This may be one reason why so few, if any, of the graduates of that institution fall from professional grace.

Be Careful.

Never extract a tooth, and particularly a lower one, without having a napkin in the mouth posterior to the tooth to be extracted. If you do, some day the tooth will fly down into the trachea and never stop until it finds a resting place somewhere along the bronchi.

**SYNOPSIS OF ACT PASSED BY
THE GENERAL ASSEMBLY
OF GEORGIA, DECEMBER,
1897.**

—
BY D. D. ATKINSON,

Chairman Committee on Legislation, G. S. D. S.
—

It shall be unlawful for any person to practice dentistry in the State of Georgia without having a license from the Board of Dental Examiners of Georgia to practice.

Does not affect those who have lawful right under the laws of Georgia to practice at the time of the passage of this Act.

The Georgia State Dental Society nominates five of its members and five non-members, from whom the Governor appoints five persons who shall constitute the Board.

Their terms of office shall be for one, two, three, four and five years, respectively.

Each year thereafter, the Society nominates two persons from whom the Governor appoints one whose term shall be five years.

The present members, Drs. John H. Coyle, B. H. Catching, H. H. Johnson, A. G. Bouton and D. D. Atkinson hold over until the annual meeting for 1898.

The Board is required to meet annually, at the time and place of the annual convention of the Georgia State Dental Society, and in the city where dental colleges are located, on or near the date of the closing of the college term.

Shall have a seal bearing the name "Board of Dental Examiners of Georgia."

All books of said Board shall be books of public record.

Said Board shall examine all applicants furnishing satisfactory evidence of having graduated from a school of dentistry whose term and curriculum is equal to that of a majority of the schools of dentistry of the United States, or furnishing satisfactory evidence of having been licensed after examination by any other State Board; and if such applicant pass a satisfactory exam-

ination, a license to practice dentistry in this State shall be granted to the applicant.

If any person becomes unfit to practice by reason of indecency, incompetency, gross negligence, etc., etc., he may be indicted in any court having jurisdiction and his license be revoked by the Board.

The offense for violation of this act is a misdemeanor and punishable by a fine not to exceed one thousand dollars. Nothing in this act shall be construed to prevent any person from extracting teeth without fee or reward.

A fee of ten (\$10) dollars is fixed for examination to defray the expenses of the Board. Members allowed four (\$4) dollars per diem for the time engaged in the duties of their office.

The fee for temporary license shall be five dollars, and belongs to the member issuing the same.

The ten-dollar fee is not refunded if the applicant fails to pass.

The Board shall make an annual report to the Georgia State Dental Society, together with all moneys received and disbursed pursuant to this act. The Secretary shall give such bond and receive such compensation as the Board may direct.

Any excess over three hundred dollars in the treasury shall be paid into the common school fund of the State.

All licenses must be recorded in the county or counties in which the holder practices, and failing so to do, the same will be forfeited, and cannot be restored except upon payment to the Board of ten (\$10.00) dollars.

It is unlawful for any person to practice dentistry or to do any dental operation under the protection of another's license.

Section 20 describes what dental practice is within the meaning of this act.

All dentists in actual practice in this State are exempt from jury duty.

Section 22 repeals all other laws relating to the practice of dentistry in this State.

However, the provision in Section 1 reaffirms the act of 1879, by which all persons are lawful practitioners who were in actual practice prior to August 24, 1872.

DENTISTRY IN RUSSIA.

Mr. A. M. Wolfe, of Wilna, Russia, writing to the *British Journal of Dental Science*, for December, gives an entertaining account of the status of dentistry in that country. Any one over the age of seventeen, irrespective of sex, is allowed to become apprenticed to a dental practitioner without any preliminary examination whatever; and though the prescribed course of study is very high, the final examinations are not thought to be thorough, as one rarely fails to pass successfully.

Mr. Wolfe adds that the majority of practicing dentists are men of little education, and as such, are hardly fit to be members of a noble and liberal profession, but there are some good mechanics among them. Of late there has been a tremendous rush into dentistry, as it is thought to be a profitable business (the same delusive idea obtains very generally in America), and men of all sorts and conditions and all ages have taken it up in the hope of gaining fame and cash. The practice of medicine and dentistry is strictly prohibited to any one not possessing the required qualification, and in the majority of cases the law is carried out with the utmost rigor, except in far-off and out-of-the-way localities where the "znakhari," i. e., sorcerers and such like charlatans, still hold their own.

The public is also fairly well protected against unskillful treatment as far as the law can protect it. Should death or even severe injury result from the unskillful or careless treatment of the dentist, the patient has only to complain to the Medical Inspector and the guilty one be ordered to take to study again and pass another examination, and if the offense be repeated a few times,

he may be compelled to give up his practice altogether.

Medical men are permitted to practice dentistry without an additional examination, and some make use of this permission, having picked up a little knowledge of operating either at home or in a few cases, by spending a few months in some dental surgery abroad. Like Russians of all sorts, Mr. Wolfe says, the dentists do not hurry themselves. They smoke cigarettes all day long, and appear rather slow to one used to the rush and hurry of an English practice. Among the foreigners he mentions the fact that an Irishman, by the name of Mr. Murphy, holds the distinguished post of dentist to the Imperial Court.

The female dentist, especially if married, brings the fees down very much, as relying on her husband's earnings she will work for a smaller remuneration than any dentist can be satisfied with. Then, too, the Russian women are passionately given to gossip and scandal-mongering, and the dentist's least mistake and unfortunate accident becomes the cause of nasty and ill-bred remarks that fly all over the town and are enough to ruin a man's reputation and drive half his patients away.

Notwithstanding this gloomy picture, our informant says there is a good future for dentists in Russia, as the public is becoming more educated in dental matters; and that people, ten years ago, who would not think of visiting a dentist, now readily seek him out.

J. A. C.

Removal of Teeth from Rubber Plates by Boiling.

Instead of holding the plate over a gas-jet until the teeth can be prized off, unpleasant odors may be avoided by boiling the plate for a few moments, when the rubber will be found yielding, and by grasping it with the pliers the rubber may be sprung from the teeth, and a few repetitions will complete matters.

SCIENCE.

Written on the eve of consolidation of S. D. A. and American Association at Old Point Comfort, August 1st, 1897, by Wm. H. Richards, Knoxville, Tenn.

Onward! Onward! Oh Ships of Science,
At thy helm Progression stands;
In her face we see defiance
To opposing shifting sands.

Onward let her watchword be
Like the ceaseless wave of time,
Now at land, now at sea
Heedless of zone or clime.

To us she came and lo! her light
Thro' unseen darkness, like Roentgen Ray
Led our feeble thoughts and sight
Face to face with Nature's way.

Thro' countless ages she must run,
O'er trackless wastes she must go,
May her ken, when she is done,
Be all 'twas meant for man to know.

A Reliable Formula for a Tooth-ache Medicine.

The following combination will be found an excellent preparation to relieve an aching tooth with an exposed or nearly exposed nerve. It may be used also in cases of sensitive dentine:

R Oil cloves.....	3 ijs.
Creosote.....	3 j.
Carbolic acid.....	3 ss
Oil sassafras.....	
Tr. aconite.....	aa gtt. xv.
Tr. benzoin co.....	3 ijs.
Alcohol q. s. ad.....	3 j.

M

Before applying the medicine, the cavity should first be washed out with tepid water to remove any debria lodged there and acting as an irritant to the nerve. Use the syringe for this purpose, being careful not to send the water into the cavity with any considerable force. After drying the cavity, make application of medicine on a piece of cotton, small enough to barely go into the cavity and be retained there.

H. R. J.

An Incisor Faced.

The following practical method of treating a badly broken down lateral incisor in which the pulp was alive, is reported in the *Penn. Dental Journal*:

The natural crown had been lost to three-fourths its extent, the remainder still stood in a healthy condition, and its length was augmented by the recession of the gum from the neck of the tooth. The pulp had receded with the loss of tooth-substance, and was still alive.

It was deemed best not to devitalize, for the reason that the patient was not to be in the city a sufficient length of time, and the tooth could be crowned without this step. So the root was prepared as follows: The palatal wall was left as long as possible, while the lingual was cut almost to the gum-margin and as near the pulp as was advisable. Between the position of the pulpal canal and the palatal surface two small holes were made with a spear-pointed drill, to a depth of about two lines, parallel to the long axis of the tooth, and a cap adjusted to the root in the usual manner. Holes were then drilled in the cap at the position of the two holes, and two stiff platinum pins were inserted, cemented in place and afterward soldered to the cap. A plate tooth of proper size, shape and color having been selected, it was backed with gold and ground to fit the cap. All the parts having then been fitted and cemented together, were removed, invested and soldered. When the crown was finished and cemented into place it gave the appearance of being an ordinary Richmond crown. As the strain of mastication upon an upper lateral incisor is such as to force the crown upward and outward, the anchorage provided in this case met the requirements.

There is a fine opening in Atlanta for a *professional* tooth extractor. The right party may write to the AMERICAN DENTAL WEEKLY for particulars.

Case of Autrum and Frontal Sinus Being in Communication.

The fact that the frontal sinus is sometimes in communication with the autrum and that a diseased condition of one cavity might involve the other where such communication existed, was probably first asserted by Dr. M. H. Cryer in his recent researches. Since then others have verified these statements, and by practical demonstrations have proven it to be a fact beyond the possibility of a doubt. Dr. Truman W. Brophy treated a case of this kind which he described before the American Dental Association. Following is a synopsis of his treatment of the case:

After making the usual openings into the autrum, removing all diseased bone and treating antiseptically, the membranes of this cavity soon returned to a normal condition, but there was still an accumulation of pus at the upper nasal surface. After several months of vigorous treatment without success, it was decided that the frontal sinus must be involved. An operation was decided upon and performed. The anterior wall of the frontal sinus was removed so as to expose the greater portion of the cavity to view. It was found to be filled with pus and denuded of membrane, and on carrying the incision downward along the inner canthus of the eye, a probe was introduced which passed without obstruction into the autrum. Continuing the operation, a portion of the nasal bone of the affected side was removed, when pus was found to dribble from the region of the ethmoid cells. These cells were curetted, some diseased bone removed, and the surface, together with the frontal sinus and autrum, thoroughly irrigated. The wound made for opening the sinus was closed and a tube introduced and the parts dressed with antiseptic gauze. Fluid boracic acid solution was daily used for irrigating the parts, being introduced through the tube. Suppuration continued for a short time, but finally ceased.

Cases of this kind could not be cured by opening and treating through the autrum alone; it would be an impossibility to reach the diseased territory in the frontal sinus through this avenue. Dr. Brophy recommends boracic acid for autral treatment, and in cases where suppuration is hard to arrest, he recommends nitrate of silver. It may be used in a strength of about 2 per cent.

H. H. J.

Compound Tincture of Benzoin.

Most of the preparations put up and sold by druggists as "Toothache drops" can be greatly improved by the addition of a small quantity of tincture benzoin compound. It not only has a soothing effect upon the over-excited nerve from near exposure, but leaves a gum coating over the point of exposure, thereby protecting the nerve from further irritation to some extent.

Dr. T. S. Kelley, in *The Ohio Dental Journal*, recommends the use of compound tincture of benzoin as a substitute for tincture of aconite and iodine as follows:

Place a drop of tincture benzoin compound on the dry gum, and cover with a pad of dry cotton, allowing it to remain from one to twelve hours. Or, in severe cases, saturate a capsicum plaster with the tincture and apply to the dry gum.

H. R. T.

An Old Cement Filling.

A few months ago I was called on to re-fill a tooth for a lady. The tooth to be filled was a superior left first molar. It and three others had been filled with cement by Dr. Dobbins, of West Point, twelve years previous. Just one of the four needed my attention. The others were in perfect condition and the cement was only slightly worn. We often see cases where we find it true that one good cement filling is worth more than several inferior gold or amalgam fillings. HENRY C. HOPKINS, D.D.S.

Cataphoresis.

Regarding the value of cataphoresis, opinions have differed so widely, it may be reassuring to the less sanguine to note what Dr. J. O. Ely has to say on the subject :

As the result of 300 operations and sixteen months' experience with cataphoresis, he is convinced that in the hands of the careful operator it is one of the greatest blessings ever given to the profession ; that it can be applied to 90 per cent. of sensitive cavities, and that it is successful in 95 per cent. of the cases in which it is properly applied.

That there is no destruction of tooth or pulp tissue.

That there is no danger of injury to gum tissue if it is properly insulated and a high voltage is not used.

That fifteen volts is sufficient to produce the required results.

That properly performed, the production of partial or complete anesthesia of tooth or pulp should be accomplished without pain or discomfit to the patient in any way.

That all patients without exception have been more than willing to pay the additional cost when the length of operation was increased by the use of cataphoresis.

That it is of great benefit where it is necessary to remove or destroy pulp, for by its use the pulp can be removed absolutely without pain.

That as a result of its use patients lose completely their fear of dental operations.

That from our professional life the nervous strain is almost entirely eliminated.

That the proper preparation of cavities is no longer prevented by nervous fears or suffering of patient.

Lastly, that dread of the operations being removed from minds of patients, necessary work is no longer neglected by them, and teeth will be kept in much better condition than at present.

A little girl who cried in a dentist's chair, told her mamma, on reaching home, that saliva ran out of her eyes.

Death

Has been active of late in depleting our ranks of some of its brightest men. The announcement is made from St. Louis of the recent death of Dr. Wm. N. Morrison, of that city. The dental engine was an offspring of his genius, and had he accomplished nothing more, it is sufficient to embalm his memory for all time in the hearts of the profession.

The lives of such men should serve as a perpetual inspiration to those who aspire to "do good unto all men, but especially unto those of the same household and faith."

A shining light has indeed gone out, and we mourn with those who mourn.

J. A. C.

Remember.

That whenever you have strong walls and accessible cavities, gold will make the best fillings.

That where cavities in molars are not subject to attrition, tin is a very excellent filling.

That tin beneath gold in any molar cavity indicating gold, makes a good filling.

That tin is perhaps the best material at the cervical wall.

That while amalgam is good in its place, there is far too much of it used.

That amalgam fillings and all gold crowns have no business on incisors.

That you must have warm water to use in the syringe when sensitive teeth are to be washed out.

That cleanliness is next to godliness, and filth will drive an angel from your office.

To Separate Teeth.

Place a coarse cotton or flax thread between the teeth up to the gingivæ ; then tie a knot right between them. This draws the thread from the gum, saves much pain to the patient, and is very effective.

bank in that city to-day, here he practiced dentistry through the summers, and with his invalid wife he spent the corresponding winters on his ranch in Florida.

In 1893 he again returned to New York City. In 1895 he pulled up all stakes and set them down in St. Augustine, Fla., where you will find him the rest of his life busily engaged at his profession.

The First American Dentist.

Dr. William H. Truman, of Philadelphia, in *Items of Interest*, takes issue with Dr. Ledyard, who declared Joseph Lemarie the first practicing American dentist. Dr. Trueman says: "Without detracting from the honor due Joseph Lemarie, he was not the first practicing dentist in America. Robert Wooffendale, a pupil of Thomas Berdmore, came to New York in 1766, remaining, however, only a few years. A Dr. Baker, of whom little is known, was before Lemarie in Philadelphia, and Isaac Greenwood, a native born Bostonian, is credited with being the first dentist in that city, practicing as early as 1770. His son, Clark Greenwood, and several others, were in New York; and Baltimore also had practitioners of our art prior to Lemarie's visit."

The opinion has long been entertained by many that our Dr. W. G. Boss will was the first American dentist? J. A. C.

Tempering Large Springs.

Large springs, like gun-springs, should be heated evenly to a blood red, and quenched in a good-sized dish of oil, i. e., in oil enough so it will not get heated from the steel pieces tempered in it. The spring should then be "lowered" a little by heating in a dish of oil until the oil catches fire and burns freely.

The AMERICAN DENTAL WEEKLY is just what the profession needs.

LEONARD R. BOOZE, D.D.S.
Worthington, Ind.

DR. S. EWING SMITH,
ST. AUGUSTINE, FLA.,

President of the Florida State Dental Association.

Dr. Smith was born October 15, 1841, in the State of New York. When but nineteen years of age he became a dental student, through the advice and influence of Dr. Frank Abbot. He has always been a close student, a hard worker, and never believing in patents, he has given to the profession many of his inventions and discoveries, afterwards to see a patent placed upon them by some one. Like many who started in the profession, he never finished his dental education, having taken but one course at the New York College of Dental Surgery.

In the sixties, after the cruel, cruel rich man's war and poor man's fight was over, we find him practicing his chosen profession in the city of New York, with a lame hand and leg.

In the eighties he took the advice of Horace Greeley and went West, built a fine and costly three-story residence and dental office combined, in the city of Council Grove, Kansas. Also a business block, in which he established the Farmers and Drivers Bank, which is the most prosperous

THE
American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription **\$2.00** per year; **\$1.00** for six months—including Canada and Mexico; other countries **\$3.00** per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, December 23, 1897.

Examining Boards and State Laws.

When laws were first commenced to be enacted and examining boards established, a great ebullition was perceptible among the faculties of some colleges. They contended that they, being the teachers, should know who were competent to practice, and that their judgment in matters of proficiency was superior to the members of the various State boards. Some differences having arisen between the faculties and State boards, the ebullition, which had had a period of rest, may be observed again. At the first thought we might say that, in theory this would hold good, but in practice it certainly does not seem always to be the case. At least, it seems that students have succeeded in escaping from the best of schools, with diplomas in their possession, who, it would take no *expert* to discover, were woefully incompetent to practice dentistry.

This was more frequent in the beginning and it has not ceased to be the case in this day. Arguments in favor of abolishing laws and boards altogether cannot but sound ridiculous and amusing to those who have served on examining boards, and know from experience and not hearsay the truth in regard to these things.

Incompetency has been charged to examiners, in that, branches are now taught that were not taught when these men graduated, who are now serving on the boards. That is poor argument for the college men. Did not some of them graduate before these new branches were taught in colleges, and is it not a fact that some who now compose prominent faculties obtained their diplomas in a complimentary manner? What applies to one should apply to both. If these examiners are incompetent to pass on the qualification of a student because they graduated before certain higher branches were taught, these teachers are incompetent to teach for the same reason.

It should take an expert to teach. As Dr. Barrett says, "he must be born a teacher; he cannot be manufactured for the position. He must have the power of impressing upon others his individuality, his energy, his ambition."

We contend that that is true, that it takes special gifts and talents to teach; but we also contend that it takes no special talent or gift to discover that *some* graduates being turned out, even in this day and time, are not competent to practice dentistry intelligently.

The time is not yet when examining boards or State laws can be dispensed with, and the time has not arrived when they will be dispensed with. They have done a great work for the profession, and a greater work for the people whom they have protected, and there is still great work ahead for them to do. They have been assailed, misrepresented and abused, but by whom? Sam Jones says the "hit dog howls."

The laity of the profession are not clamoring for a repeal of the laws. The people do not say repeal the laws, for by their representatives in the legislatures they are passing amendments at every session making them stronger and more effective for the protection of those whom they represent.

Then, if these do not want the laws repealed and the examining boards abolished, who is it that wants it done. The answer seems to be only the colleges. No, we won't say *the* colleges, we will say *some* colleges, for there are some good colleges which recognize the importance of the boards and co-operate with them in their good work. There should be no antagonism between the boards and colleges. Colleges are essential and are doing a great work in educating the incoming members. The boards are essential, for they protect the people from empiricism, by apprehending those who through fraud obtain diplomas when they are not entitled to them, and see that colleges carry out their obligations to their students to teach them and teach them well.

Did you ever notice that those who dislike to have their work inspected are generally those who do very poor work? If a man's work stands the test he don't care who inspects it. You may always be suspicious of the man who dislikes to have his work scrutinized.

We hope the differences of the boards and colleges may be reconciled, and that harmony may once more prevail. No good can come from abuse and wrangling. Each must recognize the rights of the other, and recognize that each has rights and feelings too.

The colleges must not say, "you do as we say; we will formulate some rules and present them to you, and you agree to them, and we will become reconciled and tolerate you as well as we can"

The boards must not presume to dictate too strongly. Give them time, they are coming to the standard desired by degrees. It is so much better now than it was a few years ago it is really gratifying.

H. H. JOHNSON.

Shoppers.

That the physician, as well as the dentist, is bothered by "shoppers," is shown by the following taken from the *Atlantic Medical Weekly*:

"The custom of price-cutting which possibly is of service in a mercantile way is not worthy of the medical profession. It is getting altogether too common to have patients go the rounds of the physicians' offices getting prices for an intended operation, for all the world like a bunch of women going shopping, and the simile does not end there, for frequently the outcome of it all is that the patient goes to a hospital and pays nothing, just as the shopper goes home without purchasing anything"

The shopper does not hunt for skill at all, but for price, whether he seeks the dentist or physician; why, then, should he receive any consideration from the intelligent practitioner? Some shoppers are very shrewd, and yet the "earmarks" will show on them. The truly professional dentist compromises himself by operating for such people. He may perform an operation never so skillfully, but it is not appreciated, even though he tells the patient that his regular charges have been greatly reduced because he wished to give him the benefit of skillful service. The shopper cares nothing for skill; all he wants is the price, and the dentist who caters to such people loses self respect.

The St. Louis Dental Society is taking on new life. The last meeting was held at the office of Dr. Windhorst. An interesting paper was read by Dr. G. H. Gibson on Dental Education of the Public.

The State Board of Dental Examiners were present and gave an account of their trials and tribulations. The next meeting of the society will be held at the Lindell Hotel, January 4th, 1898, at which time officers for the ensuing year will be elected and a permanent meeting-place decided upon.

Board of Examiners for Lawyers.

The legislature of Georgia has just passed an act creating the Supreme Court of the State a board of examiners to pass upon the qualification of persons entering the legal profession. Verily the trend of professional culture is upward. Heretofore a person to be admitted to the bar, had merely to go before a commission appointed by the superior court to pass upon his particular case, and such others as applied for admission at the same time. This did not seem to set a high enough standard, and the movement to better methods, after years of talk and deliberation, has culminated in the act above referred to. From the experience of boards of examiners in other professions it is to be inferred that this is a long step in the right direction and can but work good to the people as well as to the legal profession. Reviewing the history of our country it is shocking to note the condition of things thirty years ago. What a pasture Georgia must have been for the charlatan in all professions! No restriction around him, nothing between him and the unsuspecting people. Even in this day it is not unusual to see a great harvest of dollars gathered by unscrupulous fakirs in open daylight, in populous streets, for which the victims get absolutely no return, and only awake to a realization that they are duped when somebody says I told you so.

Let dentistry claim the honor, and it is justly hers, of being the first to raise its standard by calling for and securing the enactment of a law for the protection of the people against such untutored adventurers. Next the pharmacists got a board then the medical profession, and surely they needed it; and last the lawyers have come to the front, and, with their usual sagacity, have outstripped us all by naming as their board the highest tribunal of the State, the Supreme Court of Georgia.

We thus see that examining boards are

the order of the day, and however hard they are fought and opposed by men and corporations whose selfish interest it is to fight them, the people demand their establishment for their own protection and they will not down, but will themselves look upward and onward. A.

Careless Crown and Bridge Work.

More just criticism and complaint has been made against crown and bridge work than any other special department of dentistry. Even the rough, cheap class of plate work, so common among that class of dentists seeking only returns in dollars and cents for their labor, does not deserve the censure and criticism justly heaped on slovenly crown and bridge work. The plate work thus handed out to the patient is known and accepted as cheap work, while in most cases the crown and bridge work is passed off as strictly first-class in every respect.

One of the most prolific sources of evil in this class of work is a want of proper fit and adaptation of bands around the necks of teeth. In crown work this may be avoided by giving more careful attention to the preparation of the tooth or root. And the same suggestion would apply in bridge work with the additional precaution as suggested by Dr. F. F. Fletcher in *The Ohio Dental Journal*. His proposition (and a true one, too) as touching this point is: "*All bridges are ill-fitting in proportion as their piers diverge from the parallel.*" As a remedy for this trouble he offers the following plan of procedure:

How shall we parallel the piers? There is probably not an operator who would attempt to fill an approximal cavity without first securing space to properly restore the original contour. The same conditions exist here, only in a more exaggerated form, and the same principles should therefore apply. Call orthodontia to your

aid, correct the position of these malposed teeth. Straighten them up until the piers are parallel, thus eliminating the V-shaped space, securing better occlusion, and placing the abutments in position to receive the finished bridge without injury either to teeth or bands. The bridge then fits as was intended. The piers being parallel, there is no excuse for a misfitting case. Furthermore, the bridge acts as a permanent retaining appliance, holding the former malposed teeth in their proper positions. Do not attempt to parallel the piers by grinding. It is a very deceptive practice, and in nearly all cases the band leaves the tooth on the mesio-proximal surface in proportion to the distance it is forced down. Regulate the teeth, and the construction of a neat-fitting bridge is made easy.

Fruit Eating.

Each year people grow to appreciate more fully the value of fruit, and eat it, not as a luxury, but as a staple article of food. Fruits are nourishing, refreshing, appetizing and purifying, and consequently have effect upon the health and the complexion. Yet there are differences. Grapes and apples are highly nutritious. Grapes usually agree with the most delicate persons, for they are so easily digested. Nothing is easier to digest than a baked apple, taken either with or without cream. Oranges, lemons and limes are of great value as a means of improving the complexion, and they are especially good if taken before breakfast. Ripe peaches are easy of digestion and are fattening. Nothing is better to enrich the blood than strawberries, which contain a larger percentage of iron than any other fruit. Fruit with firm flesh, like apples, cherries or plums, should be thoroughly masticated, otherwise they are difficult to digest. The skin of raw fruit should never be eaten, and before eating grapes, or any small fruit, care should be taken to remove all impurities by washing. Never swallow grape-

stones. Stale fruit and unripe fruit should never be eaten, and very acid fruit should not be taken with farinaceous foods unless the person has vigorous digestion.—*The Sanitarian*.

A Substitute for Articulating Paper.

The following may be used for articulating in default of the usual paper. Take a little thin paper, wet the finger with a little alcohol or water, and rub on a little polishing rouge. This dries quickly, and takes but a few moments' time to prepare.

A prominent physician of India recently died from the bite inflicted by one of the deadliest of snakes; he had been making experiments with a view to the discovery of an antidote, and supposed he had rendered himself proof against the venom of snakes. One of the worst victims of rheumatism we ever knew was a man who had discovered a positive cure for the disease. The secretary of a notorious Cincinnati consumption cure company died of tuberculosis. The former proprietor of the Lydia somebody's great female nostrum is in her grave dead from the very diseases that her successors are indecently advertising against in the poorer class of daily papers.—*Mass. Med. Jour.*

The passage of the new Georgia Dental Law is due more to that indefatigable worker, Dr. D. D. Atkinson, of Brunswick, than to any one else. We wish every State in the Union had a hundred of such men. Georgia is proud of him, and would not swap him for a million of the ordinary kind.

There is to be the "*Indiana Dental Journal*." Dr. Hunt will, we suppose, be editor. THE AMERICAN DENTAL WEEKLY will not fail to say "howdy," when it calls at this office, as some of the monthlies have failed to say to the WEEKLY. There is nothing small about us.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., DECEMBER 30, 1897.

NO. 16.

SEPTIC INFECTION.

BY H. H. JOHNSON, D.D.S.,
Macon, Ga.

It is not the object of this article to enter extensively into the discussion of this broad subject, but simply to touch on a few points of every-day interest to the dental surgeon. It is a common thing in practice to have patients present themselves, suffering with acute pericementitis, caused by the presence of septic matter in the nerve canal of a devitalized tooth. The first step towards treatment, of course, is to remove the cause, counterirritate the sore part by medical agents, depletion, etc. Right here in this simple little operative treatment, through carelessness, thoughtlessness and sometimes ignorance, patients are frequently caused days of excruciating pain, followed by severe nervous prostration. In opening up one of these septic canals, whether inflammation exists in the surrounding tissues or not, the greatest possible care should be taken to prevent forcing the smallest particle of the contents beyond the apex of the tooth before complete sterilization has been accomplished. The pericementum is an extremely delicate, sensitive, susceptible tissue, and when once infected with the smallest particle of this extremely poisonous matter, may result in the formation of alveolar abscess in spite of all the after treatment that can be devised by the most fertile brain. At any time during the treatment of these canals where septic matter has been known to be present, it is ex-

tremely dangerous to push a probe through the apical foramen into the delicate tissue beyond. Indeed there are so many thoughtless ways in which this infection may be accomplished, it may often be done unconsciously and with a full understanding of the consequences. Medicines are commonly introduced by wrapping cotton around a small wire probe, forming a piston, and pumping it up into the canal. This is a most dangerous procedure unless done with a very delicate touch and with a piston much smaller than the canal to be medicated. Did you ever notice your patient wince and shrink away with the exclamation, "That hurt me then! Do you suppose there can be any nerve left there?" These questions sometimes prove annoying, and yet they should not. It *did* hurt, and if you will stop to think, pounds of force may be exerted through that little opening, by that tiny little force pump, with a pressure imperceptible to the hand. Not only a small bit, but half the contents of that small canal may be literally packed into the tissues beyond; almost enough to produce septic poisoning over the entire body, but thanks to nature she comes to our relief and covers up many of our faults and blunders.

Septic infection may and does come through extraction in several ways.

Half the dentists are careless with their forceps. If they are not, their assistants are. Let any who read this article take the trouble to go to his instrument case and examine critically his forceps and see if they are in perfect condition.

But the infection does not come so often from the forceps as from the tooth to be extracted. This tooth may have been aching several days. Indeed, the patient will apologize for not having cleaned the teeth for several days, "the tooth has been so sore."

No thought is taken of this, however; the tooth is grasped with the forceps which is shoved with a herculean effort down to the alveolar border, sometimes below it, carrying into the lacerated tissue whole colonies of microbes and septic matter. The patient returns in a few days with the jaw swollen, gums sloughing, and we wonder what the matter can be. Dentists are very careless on this line, but we are becoming gradually to realize its importance, and improvements will be expected for the future.

One thing that will always prove a hindrance to aseptic dentistry is the lowering tendency for dental operations. Of course a man who extracts a tooth for fifty cents with an anesthetic thrown in, cannot be expected to devote much time to sterilization of tissue or instruments. He is a mechanic, working at mechanic's wages, and if a little grease, some blood and a few germs out of the other fellow is injected into this one accidentally, he can't help it. He is working on "low cotton" wages, and is hustling to try to make an honest living, and so it goes.

Five Dentists Burned Out in St. Louis.

The Mermod & Jaccard Jewelry Company's building burned down Sunday morning, December 19th. The following dentists occupied offices on the second floor: Drs. Holmes & Turner, L. F. Prince, M. R. Moore and N. C. Stark. Drs. Holmes and Prince are reported as insured. Moore not insured. Hope the others were protected.

A short time ago Dr. J. W. Whipple's office was robbed of about a hundred dollars' worth of instruments, most of which were recovered. These visitations are not considered Christmas gifts.

WORKING AMALGAM.

The English writer is presumed to be well up on plasters. We make extracts from an article by Mr. Barton, from the *Dental Record*, on filling with amalgam. There are some points in it worthy of consideration:

First of all to describe the proper shape to cut the cavities. There is one golden rule which should always be remembered—remove all thin overhanging edges. Now there are two reasons for this, first it is very difficult to remove the decay from under them, and secondly, if the cavity be on the masticating surface of a tooth, the edges will of a certainty be broken away in a short time.

The edges must be square-cut; if they are bevelled and the amalgam brought over them, as in using gold, the amalgam will be sure to chip away and leave a rough edge, which will cause decay by affording a good lodgment for food.

The cavities need but little undercutting; no filling can possibly come out if the base of the cavity be a trifle larger than the aperture. It is best also to square up the sides of the cavity with a good fissure bur or enamel chisel, leaving, however, no sharp angles, as these are difficult to fill properly. The greatest care must be taken—and this applies to all fillings—to get a good sound cervical edge; this is the weak point, as here it is that the food lodges, and decay quickly follows if the greatest care be not taken to secure a good edge.

Now, as to the insertion of the filling. Take as an example a medium-sized interstitial cavity in a molar. Always use a matrix when there is contouring to be done. Having adjusted it, taking care beforehand to exclude the saliva by the use of a napkin or rubber-dam, proceed to put in the amalgam. Should the nerve be nearly exposed, or if the dentine is sensitive, it is best to line the cavity with a little osteo, using "artificial dentine" in the first case

and ordinary oxyphosphate in the latter. The mercury must be well expressed from amalgam by squeezing it in a napkin, dividing the stopping into two parts, one of those parts to be made drier than the other. The reason of this is because it has been found from experiments that if the top of the filling be built up of drier amalgam than that used below, the stopping does not shrink so much: the effect being brought about by the excess of mercury in the bottom travelling to and permeating the drier amalgam on the top, and so rendering the amount of mercury equal all through the filling.

Put in the first piece of the softer amalgam, and an amalgam carrier will be found of great service; there is one kind made by Ash, which is a very good one, it has a sort of piston inside which shoots out the stopping on pressing the end, and for filling distal cavities in molars it is invaluable.

The stopping must be well worked into place, and a burnishing movement with the plugger is a very good method. It is best to use a fairly small instrument when beginning the filling, as this insures any little accidental angles in the cavity being filled. Having filled the cavity, using plenty of pressure, clear off the surplus mercury, either with a flat burnisher or by means of a tin cylinder, which will quickly soak it up. Some say that by using the tin cylinders the surface of the filling is rendered rough, but even if that is so it is nothing against their use, providing the filling is smoothed off afterwards with a pledget of cotton wool.

Now the matrix must be removed and great care must be taken lest in doing so a part of the amalgam be broken away.

The patient must be warned on no account to close the mouth till permission be given, for if the filling is too high, the opposing tooth will inevitably crush down the amalgam and the whole stopping be ruined. The top of the filling must now be shaped up, and on telling the patient to close gent-

ly, if there is any excess of amalgam, it can at once be detected. It is imperative that a true bite be given, and the reason for this is obvious, for if the operator does not recognize a wrong bite, and trims his filling up to it, directly the right bite is given the filling is ruined. It is a very good way when doing amalgam that will receive the bite of an opposing tooth to get the patient to close the teeth several times before the filling is begun, and the operator can then remember what the true bite was like when finishing the filling, and there will be no danger of the catastrophe.

When the amalgam is an interstitial one, a good way of smoothing up the sides is to take a narrow strip of rubber-dam, moisten it and pass it backwards and forwards between the teeth, and in this way a perfectly even surface can be obtained; and lastly, let me emphasize the great importance of seeing that the amalgam does not overhang the cervical edge in the slightest; no matrix, however good, can prevent this, and so the operator must go carefully to work either with a flat burnisher or by means of a piece of silk, and clear away all amalgam that projects.

Wood's Metal, Fusible.

Bismuth.....	7 parts.
Lead	6 parts.
Cadmium	1 part.

This melts at 180° F. It is sometimes sold by traveling venders to be used in soldering a broken tooth to rubber plates, by use of soldering iron.

Should you break off a broach in a canal, or fail to remove entire an impacted third molar, or neglect to watch the vulcanizer and have a honey-combed plate; or burn up a piece of bridge-work, all in one day, and not violate the third commandment, you have missed your calling. Sell out and go to China as a missionary.

J. A. C

SPLICING ENGINE BANDS.

Some things should never grow old. The following method of splicing engine bands, by Dr. Maxfield, is one of them:

The manner in which most of the dentists splice their bands is, to say the least, a very clumsy one. It takes considerable time to make it, it is not very strong, and never runs smoothly. The splice which I shall show is made very quickly, makes a



Fig. 1.

strong, even splice, and runs smoothly; in fact, the harder you pull on the band the stronger it holds. The instrument, which I shall call a needle, used in making the splice, is made of piano wire, bent in the form of a hairpin, the free ends inserted in a wooden handle and fastened so that they

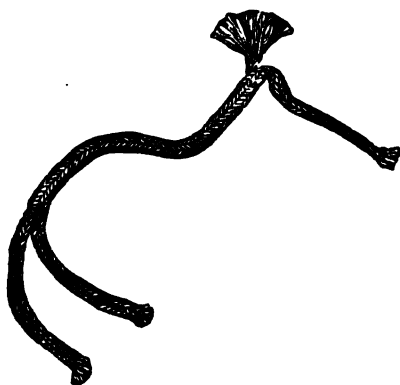


Fig. 2.

will not pull out, allowing the bow end to extend about two and one-half inches from the handle. The sides of the bow must be bent near enough together to allow it to pass easily through the center of the band. To make the splice: Measure the exact length the band must be when spliced, mark it, then cut off the band, say seven

inches longer. This extra length is taken up in the splice. A splice six inches long is stronger and runs smoother than one only four inches long. Unravel about an inch of each end of the band. Take the needle and pass the bow into the band where you have marked the end to be, then pass it through the center of the band one-half of the extra length, and then out again, as at Fig. 1. Take the other end of the band and insert into the bow of the needle just enough to hold, and pull it through and out where the needle first entered. [See Fig. 2.] Treat the other end of the band in the same way as the first [see Fig. 3] and draw the free end through. Smooth out

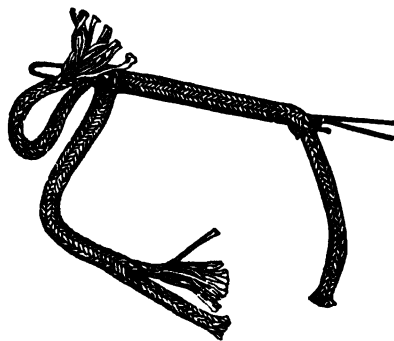


Fig. 3.

the splice, and cut the ends so that they will come inside of the band, and your splice is finished. If you wish to make the splice smoother, roll it between two pieces of wood. If your band has a core, it requires more painstaking in making the splice; yet it is easily done. First draw out the core from each end the length the splice is to be, say six inches, and so manipulate it as to have the ends come inside the band exactly where the core has been cut. If you are not particular about this you will have a weak spot at each end of the splice. If you are particular in splicing this kind of a band, you will hardly be able to detect the splice after it is finished.

Eucaïn, five per cent., in water, gives good results. Be sure the needle is anti-septic.

EROSION OF TEETH.

—

The above subject, which appeared in *l'Odontologie* some time ago, has been dwelt upon so thoroughly as to make it of great general interest. It is given, therefore, in translation.

Beginning with the definition of the word erosion: Action or effect of a destroying substance, Dr. D'Argent, the writer, proves with satisfaction that this word is by no means used at the right place in the language of the medical world. It should not be believed, he says, that in normal elements at a given moment a power can develop which gnaws, eats away, erodes; neither are there any morbid tissues which possess those properties in their relation to the sound tissue, with the exception of the acids and alkalies.

The peculiarity of formed elements to destroy a tissue and to put themselves in its place, is nothing but a modification of their natural growing properties, and is to be traced back to the higher degree of energy of some elements compared with the others, showing itself permanently or temporarily, normally or pathologically.

In the attacked tissue, assimilation is surpassed by disassimilation, and this process is repeating itself over and over again. That is the nature of the defect which has been given the name erosion.

Erosion of the teeth is an alteration of the crowns of same, which latter are worn and eaten before the time of their cutting.

It is totally erroneous, as was believed for a long time, that this change is caused by the destroying influences of acids. Even so it is very improbable that the pressure of the neighboring teeth causes erosion. The name was very likely taken to express the similarity of the appearance of these defects with the erosion caused by acids.

The erosion is an abnormality in the structure, taking place in the elements during formation of the teeth. Its shape varies

from that of curved notches, as on the cutting edges, to that of horizontal grooves on the surface of the crowns.

The defects never show on one tooth only, but appear as a rule on its mates on one or on both jaws. This is a characteristic feature. The distance of the grooves from the cutting edges varies, if more than two teeth are eroded; depending entirely on the condition which the formation of enamel of said teeth was in at the time the changes took place. As for instance, the lines on the centrals are 4 mm. off the cutting edges, so is their distance from same on the laterals 2 mm., and on the cuspids the erosion appears only as little grooves. If the indentations are on the centrals near the cutting edge, they surely are on the laterals at the same place, while the cuspids wouldn't have any defects.

Erosion occurs less frequently on temporary teeth. Dr. Parrot gives the erosion on temporary teeth in the order of its frequency: Cuspids, second molars, first molars, laterals and centrals.

Dr. Magitot has the frequency of erosion on permanent teeth as follows: First molars, lower and upper incisors, cuspids, bicuspid and rarely second and third molars.

Comparing the statements of the two scientists we see that on one hand those temporary teeth, which calcify later, suffer more from erosion, while on the other hand, the permanent teeth, which calcify first, suffer more. We prove from the statements, that erosion takes place during the first half of intrauterine life and in the first years of childhood.

There are four kinds of erosion: 1. That in the shape of grooves, more or less deep. Being separated from each other they run in horizontal lines. This is the less dangerous kind. Especially when the pits are isolated and surrounded by sound enamel. The teeth resist caries in this instance as well as in normal conditions.

2. That running in uninterrupted grooves, is a modification of the first one. We

see here uninterrupted lines with more or less deep impressions and surrounded by irregularly shaped, sound enamel. This kind, if near the cutting edges of the front teeth, causes irregular indentations and a thinning of the edges. These indentations are less deep on molars; they are shrivelled up and show pits denuded from enamel.

3. This erosion appears only in one uninterrupted groove. The crowns look to be eaten away by acids, and the surface is completely free from enamel.

The very extended or amorphous erosion is a combination, and shows specially marked signs of the former kinds. The tooth has lost its distinguishing features and has returned to the cone-shape of the teeth of our ancestors. The upper laterals sometimes look like ivory pegs, others have lost their likeness of a real tooth.

Hutchinson describes the last kind of erosion as a characteristic symptom of hereditary syphilis.

The pathogenesis is not as yet clearly understood, but the origin of the defect has been described in a way, which is based on scientific researches, and is by many accepted as true. The enamel organ is a membrane, which consists almost exclusively of small hexagonal fibers and corpuscles, being of the same shape as the enamel fibers themselves. The organ takes the shape of the crown of the tooth; each fiber is a secreting canal, whose function it is to produce the enamel prisms. We know, further on, the deposition of the calcium salts begins at the top of the crown, going towards the basis, as the calcification in every fiber takes place from the inside of the tooth, towards the outside. We understand now how a constitutional disease is able to interrupt this process and stop the deposition of the salts which are stored in those enamel cells and the canals of the basis membrane to form enamel prisms.

There are only suppositions concerning the etiology of erosion, but these seem so

definitely put down that all scientists have agreed on their main points. It is a fact, that erosion is only a temporary disturbance of the formation of the hard tooth substances in an epoch of development entirely different for every kind of tooth.

The similarity of the origin of the different erosions, without distinction as to shape and extension, should not be doubted any more. Still the views of the authors can be put in three main groups:

1. Erosion caused by all serious illnesses during childhood; this theory being held by most physicians.

2. The Hutchinson theory: Erosion is a constant symptom of syphilis. The same has been maintained in France by Prof. Parrot in 1881 and lately also by Dr. Fournier.

3. Dr. Magitot says that children who have cramps will show erosion of the teeth.

The diagnosis is comparatively easy on account of the peculiar character of erosion. It never occurs on one tooth alone, for instance, but makes its appearance on homologous teeth in one or both jaws; so that these cases cannot be mixed with abnormal structures caused by chemical or mechanical injuries.

Teeth with simple erosion are usually as well protected by enamel as normal ones. Danger of caries becomes less with advancing age. Even secondary dentin may form itself, adding to the power of resistance.

The teeth in deep-seated erosions offer a large field for numerous efforts at destruction, the dentin laid bare in most instances; the progress of destruction depending on the condition of the mouth.

It is the opinion of the writer to make the treatment rather a preventive than a curative one. The duty of every professional is, he says, to mitigate the seriousness of the illnesses or diseases by judicious medication, and in the first place to prevent

the appearances of the defects by a regulated diet during the first childhood.

If all these means have discouraged us, we take our refuge in the curative treatment to prevent caries from setting in, and to restore the shape of the teeth.

F. A. B.

LETTER FROM CANADA.

Editor American Dental Weekly:

DEAR SIR—In response to your request for a Canadian letter, we shall endeavor to "fill the bill," notwithstanding the magnitude of the undertaking. The dental profession in Canada being so widely scattered, it is not easy for any one to be in touch with dental politics from the Atlantic to the Pacific, from Acadia to the Klondyke. However, we are in hearty sympathy with your new venture in dental journalism, and wish to have the opportunity of saying so. As the editor of the *Dental Brief* says, "If there's anything new and good, Catching's in it."

Here in Canada, in addition to our own *Dominion Dental Journal*, we have learned to look to the profession in the United States for dental literature. There has in this way been maintained the kindest good feeling along professional lines for our cousins to the south of us—a feeling that the Anglophobia fostered and maintained by a certain section of your press and politicians is not entertained towards us by the educated and thinking men found in professional life. It has been well said by some one that in matters scientific and intellectual there should ever be the freest reciprocity, no matter what tariff walls divide us commercially. We take it as an evidence of your good will that you request a letter from Canada, and of anything that will promote the fraternal feeling. We say, "So mote it be!" We have in Canada, particularly in Ontario, the same problems engaging our thought as you have in the United States. The overcrowding of the

profession is one of the topics always to be heard discussed at our society meetings. It is a generally accepted proposition, however, that we have not too many dentists, but too few people sufficiently educated on the question of the importance of the teeth. Not half the dentistry is done that is required, so that when the question of overcrowding is broached it is promptly switched off to the question of educating the public.

The Toronto Dental Society met December 14th in the Board room of the Royal College of Dental Surgeons. The date of holding the dinner was set for January 25th. Dr. R. J. Read, B.A., read an interesting paper on "Dental Ethics." Discussion was opened by Dr. G. S. Martin and continued by Drs. Wood, J. G. Adams, Eaton, J. Frank Adams, McDonough, Price and Wilkinson. The next meeting will be held January 11th, when Dr. F. J. Capon will read a paper on "Implantation, Reimplantation and Transplantation."

Our genial friend, Dr. W. Geo. Beers, of Montreal, editor-in-chief of *Dominion Dental Journal*, has relinquished regular practice and is now at the services of his confrères as consulting dentist, the only one, so far as we know, in Canada. We wish Dr. Beers every kind of success in his new sphere.

The annual "At Home" of the faculty and students of the Dental College was held December 10th in the new college building, College street, Toronto. A program of rare merit was rendered in the large lecture room, after which the majority of the guests adjourned to the infirmary, which had been prepared for dancing by the removal of the chairs, etc. Those in charge deserved great credit for the great success of this annual function.

Now, Mr. Editor, we won't trespass on your space longer, but with best wishes of the season to you and your readers, will sign ourselves

CANUCK.

Dentists Should be Highly Educated.

It would have been well if the members of the Faculties' Association, at Old Point last summer, who so vigorously fought the resolution to elevate, or even maintain, the preliminary requirement, could have had these words of Dr. J. Y. Crawford thoroughly impressed on their minds: "A man, to be a good dental surgeon, needs to be a little better educated than for any other profession in the world. He ought to remain longer in college. Why? The solution is simple. Because his future occupation offers a barrier to all subsequent intellectual development. He is going to have the hardest work to make a living. Some one on the outside says: 'They will all get rich.' Do they? The most of those that I know are poor men. So much of our time has to be devoted to manual labor that a man has no opportunity to exercise his mental faculties. A large percentage of operative dentists become mere routine manual laborers. For this reason a man should be an educated man before he becomes a dentist. If you introduce the primer method you will bring into the schools men from the lower classes, men not made for the professions."

There is a world of truth in these words. It is an argument that should stimulate desire for higher preliminary requirement in colleges. We hope yet to see the day when a degree from our dental colleges will signify education both in a literary and professional way.

H. H. J.

Modeling Compound Die.

Modeling compound makes a good counter die. Take lower part of rubber flask, soften enough compound to fill it, place over it a piece of rubber dam and press die into compound, cool off and the counter is ready for use.

JACOB VICTOR HALLER, D.D.S.,

President of the Virginia State Dental Association.

Dr. Haller was born in Wytheville, Va., June 26, 1865; was educated at the Wytheville Male Academy, at which institution he received three scholarships, studied dentistry at the Dental Department of the University of Maryland, graduating with honor in 1891; received certificate from the Virginia State Board of Dental Examiners same year and located at Wytheville, Va., in 1893; was appointed member of the Virginia Dental Examining Board April, 1893, serving as secretary of same until August, 1897, when he was elected president of the board. Dr. Haller was made 1st vice-president of the Virginia State Dental Association in August, 1895, and elected president of same in August, 1896, which position he still retains.

To remove a gutta-percha filling from the canal, warm a slightly barbed or notched wire and plunge it into the gutta-percha. The heated wire softens the filling, and with a rotary motion it can be readily removed.

THE
American Dental Weekly
 ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription \$2.00 per year; \$1.00 for six months—Including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, December 30, 1897.

Corpses Identified by Dental Operations.

The terrible holocaust of the *Bazar de la Charité* of Paris is still fresh in the mind, and will go into history as one of the most awful cremations of human bodies. There were thirty bodies so carbonized that recognition by all ordinary means was impossible. Distressed relatives were anxiously calling for some means of recognition. None could be given till, as was suggested by the Paraguay consul, the dentists of the families were called in. Drs. Burt, Brault, Davenport, Ducaurneau, Gordon and others responded. With the records each had kept of his operations, it was not difficult to identify many of the charred remains. The teeth of a certain corpse would be examined by each dentist and compared with his record of operations until, if it were one for whom either of them had operated, the identification would be complete. For one

a record would show that certain crowns had been placed, for another certain gold or amalgam fillings had been made, for another a bridge. This was carried on until many of the charred remains were restored to their families for burial.

Dental Schools as Appendages.

In an open letter to Dr. Holly Smith, on the subject of schools, boards and examiners, Dr. B. F. Arrington says: "State dental schools, appendages to universities and colleges, with chartered rights and privileges and very few advantages, will be the order of the day with the dental, as is now prevalent and rapidly increasing with the medical profession, and very naturally a weak state of things will follow, with no upward tendency whatever."

We have never taken the stand that a dental department of a State university could not be just as well equipped to teach dentistry as an independent school could. Dr. Arrington has watched the progress of dentistry through many years, and may have logical opinions to sustain these views. If so, we are sorry to hear such grave and gloomy predictions for the future. However, if the worst comes to the worst and dental departments of State universities should persist in lowering the standard of the profession, our only hope for redemption lies in the State laws and examining boards. With a firm faith in their permanence and redeeming ability, we shall lose no sleep over the future from that source.

H. H. J.

A Barking Advertisement.

At a dog show at Sydenham, England, a dog is on exhibition which, being too old for competition, attracts general attention nevertheless. It is the only dog wearing an artificial denture, made by its master, a dentist.

F. A. B.

Tic Douloureux.

At one of Dr. Boenning's clinics, at the Pennsylvania Dental College, the following case is reported by the *Stomatologist*:

A man in good health had some dental operations performed; a few months later he began to have darting pains in the side of his face. These became more severe, and his face began to twitch. A little later agonizing convulsions began, having as many as forty in twenty-four hours. Nothing seemed to give him relief, and he was sent to the infirmary to have the gasserian ganglion removed, but before doing so Dr. Boenning concluded to try phosphorus in 1-30-grain doses three times a day; also potassium iodid in 20-grain doses three times a day. A week later the patient reported an absence of the spasms, and was so much improved that the treatment was continued. After a month, he was discharged as cured. Prof. Boenning calls attention to the pernicious effect of phosphorus, and urges that every care be taken to prevent bad effects.

Protective Science vs. Destructive Science.

As in all nature, so with the creative powers of man. For years a conflict has raged between the makers of armor-plate on the one hand and the destroyers of it on the other hand. Destructive science has the ascendancy.

The same battle extends down to the lowest forms of life. One builds, the other destroys. Which has the ascendancy in the physical world?

Is the end in sight? Now it comes that the ink used in schools is found to contain deadly microbes. Shall we cease to use ink? We trust that our correspondents will not become alarmed and write their articles with pencil.

Palladium Amalgam.

In writing about plastic fillings, Mr. Barton, in the *Dental Record*, speaks of palladium amalgam as follows:

Palladium, when combined with mercury, forms a very useful stopping in certain positions. It does what no other amalgam yet made does—it expands on hardening. Now this property of expansion must be borne in mind, for it would never do to insert it into a big cavity with weak walls, as the tooth would inevitably be cracked, but in small cavities, in a good sound tooth, it may be used to great advantage, particularly in those very sensitive teeth which we often meet with, where it is next to impossible to cut a cavity capable of retaining the ordinary amalgams—the expansion of palladium rendering the usual careful shaping unnecessary. The amalgam does not stain the tooth substance, but the filling itself turns jet-black, and so therefore it must not be used near the front of the mouth. Another curious thing about this amalgam is that when it is mixed with the mercury a very active chemical union takes place, so that great heat is evolved, and in some cases an explosion takes place.

It is very quick-setting, so much so that if the operator is not careful, it will set before he has inserted it into the cavity, therefore it should be used very soft.

Herr Schwarz, of Prussia, built an aluminum balloon, a trial of which was made in November and resulted disastrously, though Mr. Schwarz died before the trial trip, which may account for the disaster. The body of the ship was 134 feet long, 46 feet high and 42 feet wide. It weighed 5,720 pounds. This was not the first metallic air ship, as Monges built one in 1842 of copper.

Robert Fulton constructed a submarine boat in 1800.

Gold Solder from U. S. Gold Coin.

Dr. M. J. Bell, of Montana, sends the following query to the AMERICAN DENTAL WEEKLY:

"How can 18 carat, and 20 carat gold solder be made from coin gold, coin silver and coin copper?"

We will give him the following by Dr. Templeton, and ask the readers of the WEEKLY to give a better answer:

Take a United States \$5.00 gold piece, 20 grains of coin silver, 10 grains of pure copper, 6 grains of English toilet pins; melt the silver and add the copper. After melting this and the gold together, add the pins; flow into an ingot and roll out, cut into small pieces; melt again if it should not roll well the first time. This will give a solder a little more than 19 carats fine, and flows nicely on coin gold, being the same color. This, he calls, No 1. Now take of—

No. 1	89 grains.
Coin silver.....	7 grains.
Pure copper.....	4 grains.

Melt together and roll. This makes No.

2 and will flow on No. 1.

To make a still lower carat, take of—

Pure gold	6 dwt.
Copper	2 dwt.
Fine silver.....	1 dwt.

This makes a 16 carat solder.

Name the Color.

Some of the journals are telling about a colored female physician. Is she red, brown or black? It is very well when writing about the color of folks, to state the hue. White is the absence of color, but there are reddish, brownish, yellowish and black people in this country of ours. The Georgia Medical Board granted a license to practice medicine to a negro woman not long since. She had graduated at some medical college and passed a very creditable examination before the board.

Asepsis.

In writing on this subject Dr. Toodd, in *Dental Review*, says: "Surgeons have been too much inclined to overestimate the value of chemical antiseptics and to underestimate the value of mechanical agents. It should be remembered that scrubbing the hands and nails by means of a brush with ordinary soap and hot water will rid them of many bacteria and much of the material in which germs live and propagate, and will prepare the hands for the application of antiseptics. Indeed, if an operator had to choose between soap, brush and water, and any of the antiseptics that are used for sterilizing the hands, he would best choose the former. The best and only safe way of making instruments aseptic is by the application of heat. A quick and harmful way is to immerse the instrument in alcohol and then ignite the fluid."

Nickel-plating without a Battery.

To a dilute (five to ten per cent.) solution of chloride of zinc add enough nickel sulphate to give the solution a deep green color. Heat the solution in a porcelain vessel to the boiling-point, and immerse the articles to be plated so they will not touch each other, and boil from thirty to sixty minutes, adding water to compensate for evaporation. The articles are taken from the solution and thrown into water which has some fine chalk stirred up in it. Articles so coated have a bright nickel surface, which can be brushed with chalk, but will endure little handling.

In some respects the new dental law of Georgia is ahead of all other State enactments. It contains a clause which gives the Board the power to revoke a license for indecent conduct. We trust this section of the law will not have to be called into requisition, but if it should, woe be unto the offender.

To Remove Broken Broaches from Roots.

To remove a broken broach, Dr. S. L. Walton, in *Pacific Stomatological Gazette*, suggests the use of 25 per cent. pyrozone. Inject it up the canal, seal cavity tightly, and allow it to remain for a day or two, when, owing to the action of the pyrozone on the broach, it can be easily removed.

[The affinity which all of the different preparations of pyrozone have for steel, exerting as they do a corroding effect, would suggest the use of the five per cent. form. This is to be had more readily than the 25 per cent. but would not, of course, act with the same energy. Tincture of iodine has also been employed for this purpose with good results. J. A. C.]

Morphine in Cases of Tetanus.

Dr. Rabinski stated before the Biological Society at Paris, that the good effects of morphine on tetanus have recently been proven without doubt.

A morphine fiend was cured of tetanus by increased doses of morphine; this called the doctor's attention to it, and he began to experiment on guinea-pigs, which he treated with tetanin (ptomaine of the bacillus of tetanus) and directly afterwards with morphine. The latter not only retarded, but cured tetanus entirely.—*Zahn-ärztliche Rundschau*.

Soft Solder Formulas.

"Fine soft solder" is composed of two parts of tin and one of lead, and melts at 340° F. Ordinary soft solder is composed of one part tin and two of lead, and melts at 441° F. Tin two parts, lead two parts, bismuth one part, melts at 229° F.; tin three parts, lead five parts, bismuth three parts, melts at 202° F. All the bismuth solders are more or less pasty, and seldom flow nicely with any flux in general use.

Anxious to Appear Plump of Face.

A woman in London who was desirous of appearing plump of face, was wearing in her mouth, when she called on a dentist for something better, a small rubber plate with one front tooth on it, two partial plates supporting jaw teeth, and two rolls of paper, one for each side of the face.

We have read of many in England swallowing their plates. No wonder!

Little Corundum Balls.

Take an old bur, coat the end of it with shellac varnish, place on it a very small warm piece of a corundum wheel, place the bur in the hand-piece, revolve the engine slowly, and warm the corundum in a lamp flame. When it is soft, revolve the engine more rapidly, and mould the little ball on the bur by holding it between the thumb and forefinger. This will make the best finisher for cavity margins.

Wood's Metal, Fusible.

Bismuth.....	7 parts.
Lead.....	6 parts.
Cadmium.....	1 part.

This melts at 180 F. It is sometimes sold by traveling vendors to be used in soldering a broken tooth to rubber plates, by use of soldering iron.

Heating Gutta-Percha.

One of the old large copper coins makes an excellent heater for gutta-percha. Place the pieces on the coin and hold it over a lamp. It will retain heat long enough to work a large filling.

Mix the pumice with some agreeable antiseptic—listerine for instance—in an individual butter-plate, preparatory to cleaning. In this way the pumice can be more neatly handled, protecting yourself and patient from the dry powder.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., JANUARY 6, 1898.

NO. 17.

THE DIFFERENCE BETWEEN ANTISEPTICS AND DISINFECTANTS.

D. D. ATKINSON, D.D.S.

We often hear the question asked: What is the difference between antiseptics and disinfectants? After spending some time with the authorities on this subject, I submit herein the result of my consultation and the conclusions I have deduced therefrom.

The term "disinfectant" is a French word, says the Century Dictionary, "an agent used for destroying the contagium or germs of infectious diseases." Among the agents named as disinfectants we note: Heat, mercuric chlorid, sulphur dioxid, chlorinated lime, etc.

The same authority gives antiseptic of Greek origin, which means "anything which destroys the microorganisms of disease, putrefaction or fermentation, or which restricts their growth and multiplication. Substances used for this purpose are corrosive sublimate, chlorinated lime, sulphurous acid, etc."

The Standard Dictionary says of disinfectant: "A substance used to disinfect or destroy the germs of infectious diseases." The same authority says of antiseptic: "Anything that destroys or restrains the growth of putrefactive microorganisms."

Webster says of antiseptic: "A substance which resists or corrects putrefaction."

The same authority says of disinfectant:

"An agent for removing the causes of infection."

Foster's Medical Encyclopædia and Dictionary says of antiseptic: "Preventing or checking putrefaction or septic infection."

Disinfect: "To deprive of the capability of producing infection."

Prof. H. C. Wood, in Therapeutics, its Principles and Practice: "Disinfectants are substances employed for the prevention or destruction of noxious miasma or effluvia. It is evident that the consideration of these materials belongs to the province of hygiene rather than to that of therapeutics, since their employment is hygienic rather than medical, preventive rather than curative."

Under the same head he uses antiseptic as a synonymous term, and says: "An antiseptic is not always a germicide, though a germicide is always an antiseptic." He mentions water and fresh air as disinfectants, by diluting effluvia, and fire, as the most potent, while among the medicinal agents mentioned we find corrosive sublimate, chlorine, carbolic acid, etc

Aseptic and Antiseptic Surgery, by Professor Gerster, of the New York Polyclinic. The difference between aseptic and antiseptic surgery: "The aseptic discipline is a purely preventive one. Antiseptic treatment, on the other hand, refers to such wounds as have become the seat of infection, causing inflammation, suppuration and the higher forms of sepsis. * * * * The object of antiseptic treatment is the eliminating and elimination of established septic processes by drainage and disinfection."

I might go on and quote authorities on this subject, but as all seem to concur, I do not think it necessary at this time to give more space to such citations.

We observe: If there is a difference between an antiseptic and a disinfecting agent, it is hard to definitely point it out—that is, to draw clearly and conclusively the line which will leave disinfectants on one side and antiseptics on the other.

We note that the same substances and materials are used for the one purpose as for the other; that each are employed to destroy or restrain the growth of microorganisms, to render them inert, to produce asepsis or sterilization.

Professor Wood, under the head of Antiseptics, uses the term disinfectant almost exclusively.

Now, a germicide does always disinfect and is antiseptic, though it is not necessary for a substance to be a germicide to disinfect or to be antiseptic. These substances may be used in a more diluted form which, while they would not destroy microorganisms outright, would render them inert, prevent their growth and further development, and to that extent would it be disinfection and the treatment antiseptic.

From the foregoing, while not going into the details of how the condition of sterilization, antiseptics or disinfection is produced by these agents, the writer is of the opinion that inasmuch as the same agents are used for the same purpose, under the same conditions, to produce the same results, there can be no real difference between antiseptics and disinfectants.

Hot Vaseline a Hemostatic.

Dr. Rumboldt, of St. Louis (*Pract. Med.*), says that he always sprays the nasal cavities with vaseline as hot as it can be borne by the patient after any operation in the nose which causes hemorrhage. No matter what the amount of hemorrhage, Dr. Rumboldt says this will always promptly check it.

DIAGNOSIS.

The following extracts from an article by Dr. H. E. Beach on the above subject, in the *Dental Headlight*, contains some suggestions that are entirely new in thought. They are well worth studying. He says:

“Diagnosis, which primarily means the art of recognizing the presence of disease from its signs or symptoms, and deciding as to its character; also, the decision arrived at.

“The successful practice of the healing art rests solely on the ability of the practitioner to clearly diagnose the departure of natural function from its normal condition; and yet, if one is able to do this and no more, he will often find himself at sea as to the best means of wooing wayward nature back to its normal or physiological condition. To determine the distinguishing characteristics between similar diseases, or diseased conditions when the symptoms or signs are largely similar, is of such vast importance that it forms a subject of itself: ‘differential diagnosis.’ Let me ask the question: Who would feel capable of treating a patient for the common complaint of odontalgia, or, as your patron says, toothache, who was unable to differentiate between pulpitis and periodontitis? While many diseased conditions make themselves manifest in a manner similar to each other, there are usually, if not always, some pathognomonic symptoms which enable us to differentiate between it and others of a similar nature.

“It was not my intention or expectation to write under the broad head of ‘physical diagnosis,’ but simply to make some suggestions as to a few simple methods of diagnosing pulpless teeth or teeth with dead pulps in them. First, let me say that all teeth with dead pulps in them are *not* pulpless teeth. To differentiate: A tooth may have a pulp in it that has recently become dead from concussion or strangulation; this would

be a dead tooth in the common phraseology, but not a pulpless one. I would not say a tooth with a dead pulp in it is a dead tooth, nor would I say a pulpless tooth is a dead tooth; yet, so far as the major portion of it is concerned, it is as dead as would be our whole body if our heart or brain were removed. But a pulpless tooth is one from which the pulp has been removed, whether it was dead or alive when removed; while a tooth with a dead pulp may or may not have the pulp still remaining in it. In either case the common verdict is that it is a dead tooth. Then why define the difference? I answer briefly: The pulpless tooth cannot have putrefactive decomposition of the pulp, while the tooth with a dead pulp can and often does do so. This being a fact, differential diagnosis is of the greatest importance, in consideration of the fact that in either case there may be, and often does occur, periodontal inflammation that would require a totally different treatment. Again, teeth may, and sometimes do, show many of the characteristic signs of devitalization, such as pain, soreness, elongation, etc., when the pulps are very much alive. Exostosis of cementum, inflammation of the lining membrane of the antrum, congestion of the tissues about the teeth when pyorrhea is present, impaction of food, or the careless use of wooden toothpicks are some of the causes which sometimes produce this condition. In order that this paper may not be too long, I will only mention some of the pathognomonic signs that will, if carefully and properly observed, enable most of us to clearly differentiate the pathological conditions whenever it becomes necessary to do so.

"First, a tooth with a dead pulp in it shows very little, if any, change of color. It is not sensitive to cold, but will indicate clearly that the pulp is dead—first, by becoming painful; secondly, by soreness to pressure or percussion, elongation, etc.

"Perhaps it would be well to state, by way

of parenthesis, that pulps sometimes die and the tooth will never give pain, the pulp drying up without putrefactive decomposition, but this is an exception to the rule, and not the rule in such cases.

"Pulpless teeth may be recognized, first, by change of color, sometimes very decided, at other times slight; but a practiced eye will usually be able to determine the condition, even where the tooth has been skillfully treated and filled. There will be some opacity under the free margin of the gum that will speak pretty clearly as to the loss of pulp.

"Secondly, and very positively, your patient will be able to tell you whether the "nerve" was ever taken out or not. The pain in both classes of teeth above referred to begins with a feeling of fulness and slight uneasiness, growing worse on lying down at night, and is slightly less painful after arising in the morning, but if left to itself gradually grows worse until it becomes unbearable to the patient, and then the trouble begins with the dentist.

"That class of teeth or character of pain, with some of the symptoms that are caused by pulpless teeth or devitalized pulps that are referred to as having some of the same symptoms, may be recognized by their extreme sensitiveness to cold, or, I might say, thermal changes, whether it be cold or hot. This difference alone is sufficient to determine the nature of treatment."

Root-Filling Material.

Several times we have seen the following recommended as a root-filling material:

Oxid of zinc and iodoform, equal parts, mixed with oil of cassia. Some omit the iodoform and use oxid of zinc and oil of cassia.

Ophthalmologists now recognize the bicycle eye, a specific disease brought on by the dust and dirt introduced into that organ by riding on the road.

CORRESPONDENCE.

NEW YORK, January 1, 1898.

Editor American Dental Weekly:

Of course this "greater" city must have a word or two to say to you in your new venture, and it is to the effect that THE AMERICAN DENTAL WEEKLY is the brightest bit of literature for perusal by the busy dentist that has ever appeared among us. We are pleased to give it our hearty support, with the hope that it will flourish in prosperous fashion as does a well and widely known medical weekly, and there is no reason why it should not. The personnel of its journalistic staff and of its chief editor are signals of success. Your "Compendium" was an unusual venture, I believe, but who of us would forego perusal of each volume's pithy contents?

Dental legislation and the enactment of amendments to dental laws seem to engross the attention of too many in our ranks at the present time. Several editors have recently seen fit to agitate the drafting of new laws, which are supposed to amend or nullify others which *were amendments to laws* formulated for the purpose of regulating dental practice in this State about twenty years ago. This statement reads confusing, but not as the mere titles of all this law stuff would if seen in consecutive print.

An attempt was made at the Second District Dental Society in Brooklyn a few nights ago to pass a resolution that an amendment be instituted to the laws which are supposed to regulate the sale of nostrums. Dr. Thayer (of big 4 fame) attempted to discuss his side of the question, but the privilege of the society was not granted him, and finally both he and Dr. Ottolengui's amendment were voted "out of order." That society had quite a good attendance at its meeting. Quite different was it at the gathering of the First District Society the next evening, although a very interesting contribution to the abnormal

conditions of pharynx, nose, etc., an excellent paper, was presented by Dr. Hubbard, Professor and Dean in the New York Dental College (formerly school). Dr. H. is an M.D., a specialist in diseases of the nose and throat. The natural conclusion would be that anything from the medical profession on the "Immediate and Remote Cause of the Malformation of the Dental Arch" would call out a large delegation. About sixteen members put in an appearance and possibly as many students and visitors, but not one who had made the subject a special study, nor even one fully qualified to discuss the subject.

The doctor said that almost invariably nasopharyngeal defects were concomitant with oral, and that fully 90 per cent. of our population had deflected nasal septa. But what was most pleasing of all, was to hear him say that we were apparently progressing in the proper direction in the correction of dental malformations.

Dr. J. F. P. Hodson has just presented the First District Dental Society with quite a number of old dental periodicals and literature, which is to be added to the A. L. Northrop, D.D.S., Dental Library at the Academy of Medicine. Duplicates are to go to the Alumni Association of the New York College of Dentistry Library, I believe. The First District Dental Society recently donated \$250.00 toward the establishment of this dental library at the Academy of Medicine, Dr. Northrop having already started it by the donation of a large number of books and magazines.

Dr. Geo. Evans, we are glad to inform you, has won his suit with Dr. Rynear, which has been in the courts over six years. Dr. Rynear claimed priority in the matter of a *seamless crown*, and did everything possible to gain the case. We are certain the profession at large will congratulate Dr. Evans on the successful issue of the case, which incurred upon him personally very heavy legal expenses.

The New York Institute of Stomatology will give its second annual dinner at the New Delmonico Friday evening, January 14th, 1898. The institute will be honored by the presence among its guests of eminent men from various professions and from public life, who will respond to toasts bearing upon methods for the advancement of professional standards. Dr. E. A. Bogue will preside upon this occasion, as he is the newly elected president.

The Odontological Society, at its annual meeting, elected Dr. Safford G. Perry president. This society instituted afternoon clinics last winter on the afternoon of the regular meeting. We hope to give you something interesting from them this winter.

The First District Dental Society will meet with the Second District Dental Society in Brooklyn January 10th on the occasion of the annual meeting and consequent collation. Yours,

"METROPOLITAN."

Meeting of the Southern.

Editor American Dental Weekly:

The next meeting of the Southern Dental Association (branch of the National Association) will convene in St. Augustine, Fla., February 22d to 25th inclusive.

The president and officers of the Association have been actively at work for the past few months and have met with gratifying encouragement. This being the most delightful season of the year to visit Florida and the quaint and historic city of St. Augustine, we predict that this will be one of the most largely attended and profitable meetings during the history of the Southern.

Yours fraternally,

S. W. FOSTER, Secretary.

From art stores can be procured clay, which, if mixed with glycerine, will make moldine or molding clay. It may be mixed with water, but that dries out quickly and requires a new mix for each use.

ITEMS FROM TEAGUE.

TO CROWN HOLLOW ROOTS.

When a very "hollow" root presents for a pivot-crown, fit the latter as best you can, after filling the root, then lay aside. Roughen the thin walls of the "hollow" where there is least danger of perforation. Now insert a soft wood pivot whittled to the shape and size of the metal pivot in the crown and around it pack amalgam to the margin of the gum. When it becomes hard drill out the wood and place the crown, which may now be done easily and satisfactorily.

SEPARATING CAST FROM WAX.

If in separating bite-plaster casts from the wax, the plaster teeth are broken and scaly, flow thin cement over the fragments left in the wax and replace the cast in the bite. When the cement hardens, separate carefully and the cast will then be perfect.

FOR IRRITATED GUM.

The transparent amber-colored oil-cloth of the drug-stores is a very serviceable material to put between the gum and irritating regulating fixtures.

BEST ENGINE BAND.

The most serviceable engine band is the steel spiral spring band.

WASTE RECEPTACLE.

Get in the habit of putting waste cotton, bibulous paper pellets, worn disks and ligatures into a small box, basket or vase placed on the cabinet, and stop littering the floor around the chair.

GLYCERIN LUBRICANT.

Glycerin is better than water to "wet" a diamond drill with, when cutting enamel or drilling into an artificial tooth.

B. H. TEAGUE.

The AMERICAN DENTAL WEEKLY, which is now seventeen weeks old, will enter the new year a bouncing youngster, with a happy greeting to all.

DOTS FROM SWITZERLAND.

 BY W. C. ATCHARD,

 Zurich.

For temporary stopping, the following is used extensively in this country: Unglazed oxid of zinc and a solution of sulphate of zinc in distilled water, 1 to 3. The oxid and sulphate solution are mixed to a cream-like paste and incorporated with cotton. This hardens very quickly.

Cobalt is used here in the place of arsenious acid. The powder is mixed with an equal amount of cocain crystals, and a trace of water to mix the two; incorporate with cotton and apply. It may be safely left for two or four days.

When tempering steel, soap well the end to be tempered before heating to redness and plunging into water. It will come out an oxidized grey and the temper can be drawn at once, without sandpapering.

Annealing Gold.

Dr. Barrett gave the following as his method of annealing gold. As he is good authority, it may be well to quote him.

His apparatus for annealing consists of a tray of the finest thin sheet steel, with symmetrical indentations for holding the pellets, so that they may not come in contact with each other. He says probably mica would be better for the tray and, indeed, has used it, but it burns out after a while and, besides, it cannot be indented like the steel or iron sheet, and the pellets get in contact and cohere, thus causing trouble. He has, therefore, for a long time used only the iron tray. Beneath this tray is a small Bunsen burner, to which it is attached, the tube not quite as large as that of a common gas burner. The relative supply of gas and air to this is so arranged that the flame can be turned down to the smallest point. The flame which he ordinarily employs is not more than an inch high and proportionately

small, while the combustion is so nearly perfect that it is difficult to tell by sight whether or not it is lighted. It gives an average temperature for annealing of about 700° F. Some foils will anneal sufficiently at 600°, while others require 800°. Gold at a cherry red heat is about 2,000° F.

To Prevent Recurring Decay.

One method for doing this is given in the *Stomatological Gazette* by Dr. Hart, and is as follows:

To stop decay recurring at the margin of the gums or around fillings, dry very carefully, then apply 25 per cent. pyrozone for about three minutes to thoroughly cleanse. Now apply formalin 40 per cent. full strength, continuing this for five minutes, then dry thoroughly and melt paraffin and salol, equal parts, over the surface, endeavoring to have the partly decalcified tooth-substance take up the paraffin and salol. This preparation he gave to the profession over two years ago, for filling root-canals. It is prepared by melting a mixture of equal parts paraffin and salol and then allowing to cool.

If you are filling a tooth have the cavity prepared; harden with formalin (40 per cent.) for five minutes, then dry and coat with varnish of Canada balsam, containing 2 per cent. of formalin. If it be an amalgam, line with cement filling, burnish the amalgam into this sticky lining. Proceed similarly with gold and gutta-percha fillings.

New Year Resolutions.

The following are the resolutions that you should adopt, at the beginning of the new year:

Resolve 1, That I will become a subscriber to THE AMERICAN DENTAL WEEKLY and send \$1.00 at once, for six months.

Resolve 2, That I will not only become a subscriber, but a contributor as well, and will send all the items possible to the editor

The XII. International Medical Congress.

The XII. International Medical Congress met in August, 1897, at Moscow, Russia. The meetings of its section of dentistry were attended by dentists all over the globe. The dentists of the United States were ably represented.

The presence of notable dentists was sufficient to call forth the general interest, and, although nothing new in the field of dentistry was demonstrated, the papers read and speeches made were given due consideration.

Russian dentists were represented by many of the fair sex, which latter actually make up the greater contingent of our Russian profession.

The efforts made by some in behalf of the hygiene of the mouths of school children deserve special mention. The following motion was carried:

Resolved, That the XII. International Medical Congress, Section of Dentistry, as the highest competent forum, ask the respective governments to make compulsory the hygiene of the mouths of the school children up to their graduation, and to lay the enforcement and supervision of this law in the hands of competent dentists.

It is gratifying to know that efforts in that direction have been made in Austria, Germany, and Sweden, where the local societies have taken it in their hands.

F. A. B.

An Efficient Chisel.

A chisel in a cone-socket handle of the engine mallet will be found very convenient in many cases for cutting enamel walls for entering cavities. The rapid strokes of the engine mallet enable you to take small particles off at a time and yet accomplish the work rapidly. In many cases it is less painful to the patient than the use of either burs or hand chisel.

H. R. J.

Temper of American Swords.

There is an impression among many people, who read about the wonderful steel used in the manufacture of ancient swords, that the art of steel-making, so far as high quality is concerned, has been lost in modern times. Curious stories are related of the Damascus blades, of the way in which they were made, the process of tempering them, and all their superior qualities; but they have been more than equalled by swords made in this country within the last few years.

N. P. Ames, of Cabotville, Mass., was a famous sword-maker during the war times, and he had great pride in the quality of the sword blades which he forged. To test their quality, in comparison with the best that tradition said were to be found in the world, he visited Spain with specimens of his handiwork; and when the authorities there produced from among the rarest treasures of their armories a sword that was particularly famous, and tested it in his presence, he successfully submitted his samples to tests which were much more severe. It may not be generally known, but it is nevertheless a fact, that in no country are better swords made than have been manufactured in the United States for the last seventy years.—*Locomotive Engineering*.

Does This Affect You?

If you are appointed on a committee, discharge the duties imposed the best that you can; but should you fail to appreciate the honor conferred, and propose to go to the Association empty-headed and empty-handed, notify the president of your intention at once. This will give him time to supply your place with some one who will measure up to the full demands of the occasion.

Beyond doubt, the meeting at St. Augustine will be largely attended, and this fact should be your inspiration to write, talk or clinic.

J. A. C.

Committees of the Southern Dental Association—Meeting to be Held in St. Augustine, Fla., February 22.

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C. L. ALEXANDER,

Corresponding Secretary.

Treating Rubber Dam.

To get rid of the disagreeable odor and unpleasant feeling that usually accompanies rubber dam, wash it before using, and after thoroughly drying it, sprinkle over the surface on both sides a small quantity of Menen's Borated Talcum. Rub it a few times between the hands and you will find a nice, smooth surface on either side of the rubber with a very mild, agreeable odor.

H. H. J.

THE
American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - - ATLANTA, GA.

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription \$2.00 per year; \$1.00 for six months—including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, January 6, 1897.

The Time for Action has Arrived.

The admission of dentists into the army and navy has been a prolific theme for discussion for the last ten years, not only by members of the dental, but by distinguished representatives of the medical profession, both in Europe and America, and the consensus of opinion points to the absolute necessity for the employment of army and navy dental surgeons.

In the face of such unanimity of sentiment, what are we waiting for? The time for action is *now*.

Recent events in national affairs lead to the conviction that many radical changes will be effected at an early date in the size, personnel and regulation of the army and navy.

The Southern Dental Association convenes at St. Augustine on the anniversary of the "Father of his Country." What an auspicious occasion for the inauguration of

a movement looking to the welfare of the defenders of our common country!

Let the association pass a resolution requesting President Fillebrown, of the National Association, to appoint a legislative committee *at once*, with instructions to proceed to Washington not later than the first of April, and press the matter before the proper authorities.

Such a request from a *branch* of the National Association should not embarrass or deter President Fillebrown from acting upon the suggestion. We dare say his action in the premises would be overwhelmingly ratified at Omaha in August.

The question of mileage or *per diem* need not be considered for a moment. There are hundreds of patriotic men in the profession, at every point of the compass, who are willing to assume the task without remuneration; and there are capable representatives in Congress who would esteem it a privilege to draft a suitable bill and urge its passage.

It is given out through the press that General Miles proposes, at the first session of Congress, to recommend an increase of the army, and other changes. The small war cloud which has hung menacingly over the country for the last two years will doubtless force the government to concede all he should ask, and possibly more. In the midst of this enthusiasm any proposition conducive to military efficiency will no doubt be eagerly adopted.

To postpone action until after the Omaha Convention would, in our opinion, invite opposition, not to say final defeat. Now is the time to strike! "He who hesitates is lost!"

J. A. C.

The Pacific Coast Dental Congress which has held one successful meeting, and which is contemplating a meeting this year at Salt Lake, is considering the question of becoming a branch of the National Dental Association. They can do this and not lose their geographical identity.

A New Dressing.

Our sister republic, Mexico, shows many evidences of progression, not only in commercial affairs, but in the arts and sciences. Dr. Reed, in the *Dental Register*, had his attention called to a new dressing while touring in that country. He says: "It is nothing more nor less than asbestos put through a process of refinement. It has several virtues. In the first place, it is very soft. In the next place, it is capable of complete sterilization. Place some of this dry on a plate, put a few drops of alcohol on it and ignite it and the sterilization is complete. The absorbent properties are better than those of cotton. When dampened it becomes very smooth, absolutely non-irritating, and if then used as a sponge you will not disturb surface lymph deposits or granulations. Enclosed in a little gauze, it makes a perfect sponge, as sensitive as the most refined of sponges. It can be had in various forms. For instance, it is gotten up in the form of a wick. It is used for various dressings. It is thoroughly sterilizable.

The Devil.

A few years back it was the custom, when a typographical error occurred to jump on the "devil." But now that this satanic representative has ceased to be a part of the printing office, what shall we do? Dr. Johnson is made to say repeatedly autrum instead of antrum; we accuse the Englishman of being familiar with plaster instead of plastics, and Dr. Bonwill is called Bosswill. The latter, however, is not such an egregious error.

Charge it all up to the Christmas holidays and we will turn a new leaf. Our head proof-reader says that she will do better.

Listerine is a household, office, national and international word.

Change the Scarecrow.

In an editorial in the *International Dental Journal*, the assertion is made that "the existence of State Examining Boards has grown largely out of a jealousy of colleges in general and a selfish desire to prevent overcrowding in the ranks of both dental and medical workers." This editorial also asserts that an effort is made to divert the public mind from their real purpose by claiming to have in mind the upbuilding of the profession.

Now it is evident from statistics, which are facts and cannot be denied, that if that be the object of the Examiners, they are missing their calculation.

It seems in order to frighten them off, the Examiners will have to change the dress of their scarecrow. Of course that is granting they have such a thing as charged.

H. H. J.

Temperature for Food and Drink.

It is of considerable importance that food or drink should be of the right temperature. For healthy people, hot food should be served at a temperature about that of the blood; for infants it is imperative that milk should be given at blood heat. Drink intended to quench thirst should be at a temperature of from 50° to 70° F. Drink or food at extremely high or extremely low temperatures may do great damage, and are most harmful when swallowed rapidly. Drinking-water is best taken at 55 degrees, seltzers and soda-water should be slightly warmer, and beer should not be cooled to more than 60 degrees; red wine is best at 65 degrees; white wine at 50; champagne is the one liquor which is best at the lowest temperature allowed, but should not be taken lower than 45 degrees. Coffee and tea should not be taken hotter than from 105 to 120 degrees; when it will be found to have the best aroma.—*Exchange*.

A Simple Storage Battery.

Get two half round porous cups and a round glass jar large enough for the two porous cups to stand in upright. Get two plates of sheet lead one-sixteenth of an inch thick, wide enough to fit the half round side of the porous cups and deep enough to come an inch or so above the top edge of the cups and jar. Solder a stout copper wire or a screw post to each lead plate at the top. Place the lead plates in the cups and fill the cups nearly full with a paste made of red lead, mixed with a solution of sulphate of soda thin enough to run like a cement. The glass jar containing the two cups should be filled to within half an inch of top of cups with sulphuric acid and water, about one part of acid to eight parts of water. One plate should be marked X, so that, in charging, the currents will be correctly connected. This may be charged by attaching to a series of a dozen sulphate of copper cells, for twenty-four hours, or from a dynamo. It should always be charged in same direction, and it will improve by repeated chargings. A wooden cover may be fitted to the glass jar, and evaporation of the fluid should be replenished by adding water. Two or more cells of this battery will work small motors, lamps and induction coils, and if thoroughly charged will retain a large volume of electricity for considerable time. After once being well charged, four to six cells of sulphate of copper battery will recharge it.

Dr. F. P. Welch, of Pensacola, Fla., will locate in Augusta, Ga. While he was in Augusta prospecting, last week, a thief, at night, entered his bedroom and relieved him of his watch, railroad ticket, a new suit of clothes, and about \$175.00. The thief knew the difference between a Florida and a Georgia dentist.

For Pulp Capping.

The following formula for a pulp capping, by Dr. Kellogg, seems especially adapted for that difficult and uncertain operation, and must be superior to those that contain medicines like creosote, oil of cloves, etc.

The material he uses most in capping exposed pulps is made according to Flagg's formula for zinc, pulverized to an impalpable powder, one part, and calcined oxide of zinc two or three parts, and these thoroughly triturated.

The fluid consists of gum arabic fifteen grains, water half ounce. After it is thoroughly dissolved add one grain sulphite of lime and filter. The parts should be kept dry and a thin mix made of the cement, and a portion placed accurately over the point of exposure and the frail dentine surrounding it.

A short time should be allowed for the capping to harden, when it may be covered with oxyphosphate or any suitable non-conductor, to give sufficient depth of non-conducting filling to break off thermal changes. The balance of the cavity may be filled as indicated.

He says when due care and skill have been used in the successive steps it is unnecessary to insert temporary fillings.

Where Are They?

Where are those students of law, medicine or dentistry, who "graduated with first honor," or who "led their class," "stood a most brilliant examination," "an augury of that success which will soon crown their efforts?" etc., etc.

Now and then, here and there, this newspaper eulogy and prophesy is occasionally justified, but in very truth the claims are so stereotyped they are often regarded with suspicion by the public, and are a positive hindrance to one's rapid advancement.

J. A. C.

To Make Heating Gas.

Some years ago Dr. Davison gave the following method for making gas, which may prove interesting to many readers.

It can be constructed at a cost of not exceeding two dollars for materials and the production of gas at a mere trifle of expense: Make a small bellows, which forces air through a rubber tube to the bottom of a two-quart kerosene can, to the spout of which can is a rubber tube leading to a small gasometer, made of tin, varnished inside and out with asphaltum varnish. From this is a tube to a wash bottle, and from this is a tube to a Bunsen burner.

Put about a quart of gasoline in the kerosene can or generator, work the bellows which forces air through the gasoline into the gasometer, where it awaits your pleasure in the form of a gas which is nearly equal to that servant which our city brother is so fortunate as to possess.

Healing Salve.

The following salve will be found a useful application for chapped lips and slight abrasions:

R Boric acid..... 2 parts.
Vaseline..... .80 "
Glycerine..... 3 "

M. The above may be perfumed by the addition of a few drops of attar of roses, if intended for a lip salve.

A dentist who has come from another State to Maryland, and who has failed to pass the State Dental Examination, has applied for an injunction restraining the examiners from enforcing the act in question as far as he is concerned.—*Maryland Med. Journal*.

The *Pacific Stomatological Gazette* will change its name to *Pacific Medico-Dental Gazette*. We trust our valued contemporary will stick to that name, as it has had half a dozen.

Retaining Dressings in Teeth.

Dr. Mitchell gives the following method as very useful in retaining dressings in teeth that have been fractured by an accident, or where the walls of the cavity are so broken down as to prevent the possibility of retention by any other method: Take a piece of rubber tubing, such as is used for regulating, and of requisite caliber to pass readily over the tooth, cut to length required to envelop crown of tooth. To facilitate application where the teeth are close together, soap the tubing slightly, then with the aid of a pair of right and left burnishers, or other suitable instruments, it can readily be carried to place. When *in situ* the band covering point of application can be distended, application made, and band allowed to assume its original position.

Equal to the Emergency.

The effervescent, irrepressible and unique Dr. Sid Holland has quite an original list of antidotes for poison—all guaranteed to cure, or kill.

It seems that on one occasion his protégé, Pink Campbell, had eaten, by mistake, a poisonous mushroom. Campbell, having unbounded faith in Holland's miscellaneous knowledge, appealed to his patron for relief. "The man and the occasion met." Without the slightest hesitation, Holland said, "Pink, take tannic acid; which will form tannate of 'mush,' and leave the 'room.'" J. A. C.

Leaming's "Vulcan" Carborundum Disks are the best tools I have found for cutting off portions of teeth preparatory to crowning. The anterior teeth can be sawed off at right angle to long axis of tooth, molars can be closely ground on morsal surface and remaining portion between grooves easily broken down with chisels, thus saving much disagreeable grinding. HARPER.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., JANUARY 13, 1898.

NO. 18.

A MEDAL FOR DR. WILSON, In Recognition of His Heroic Act at Old Point Comfort.

Dr. F. C. Wilson has been presented a gold medal by the Southern Dental Association in recognition of his bravery in saving the life of Dr. Jules J. Sarrazin, of New Orleans, while bathing at Old Point Comfort last August.

The presentation was made informally yesterday by Colonel J. H. Estill in behalf of the Dental Association. The medal was forwarded some time ago, and it was the intention to make a formal presentation of it on Christmas day. Dr. Wilson left the city for Florida, however, before the medal arrived and has just returned.

The Southern and the American Dental Associations met at Old Point Comfort last August. Dr. Wilson was in attendance with a number of other Southern members, among them Dr. Sarrazin, of New Orleans, who was bathing with a party off the pier in front of Hygeia hotel. He was a good swimmer, and was out a considerable distance from the shore when he was seized with cramps. None of the others in the party were swimmers, and the drowning man was about to sink for the last time, when Dr. Wilson, who was on the piazza of the hotel, was attracted by the cries for help. He ran down the pier, pulling off what clothes he could on the way, and jumped into the water with his shoes on. He reached Dr. Sarrazin easily, but it was with great difficulty that he got him to the shore.

Soon after he caught hold of the drowning man and started shorewards with him, the latter became unconscious from loss of strength and from having taken in so much water. By the most heroic efforts Dr. Wilson succeeded in bringing the apparently lifeless body to the shore, where vigorous work shortly afterward restored Dr. Sarrazin to consciousness.

The American Dental Association the same day presented Dr. Wilson a set of resolutions commending his bravery and urging the President to direct a government life-saving medal to be struck in recognition of the heroic act. The Southern Dental Association at once decided to present Dr. Wilson a medal. It was made and forwarded to Colonel Estill, editor of the *Savannah News*, to be presented. Accompanying the medal were the following letters:

December 18, 1897.

Dr. Frank H. Wilson, Savannah, Ga.:

MY DEAR DOCTOR:—It is with great pleasure that I transmit to you, through Mr. J. H. Estill, the medal awarded you by the Southern Dental Association for your act of bravery on August 4 last; and I feel it an honor to have assisted in the commemoration of the deed by being selected to design and execute their commission.

I sincerely trust that you will not again be called upon to risk your life in behalf of another, knowing full well that should such an occurrence arise you would not hesitate for an instant in responding.

Hoping the coming years will prove fruit-

ful of prosperity and happiness, believe me, yours sincerely,

C. EDMUND KELLS, JR.

KNOXVILLE, TENN.

Dr. Frank Wilson:

DEAR DOCTOR—It is with pleasure I think of you and the manly, generous act at Old Point Comfort which prolonged the life of your fellow man for, it is to be hoped, some mission of like importance, maybe, to some of our Maker's fold. It was my honor to be president (and presiding over) the Southern Dental Association. To me, by resolution of the Association, was left the privilege of appointing a suitable person to carry out its wishes. In appointing Dr. C. E. Kells, whose motion led to the adoption of the resolutions, I voiced the unexpressed sentiment of all his confrères.

You will pardon the following few crude lines, which I have linked together, imperfectly, as they fell from the pen of one who wrote them for no critic, but for the touch which makes us kin.

With best wishes, Merry Christmas and Happy New Year, yours cordially,

WILLIAM H. RICHARDS.

A premonition, born from above,
Held thee to duty, bound by love,
To stay the cruel wave, whose sigh
And rustling rush would hush his cry.
By nature 'quipped with godly heart
To act for man a Savior's part;
To save another's life, O! impulse divine!
Heedless of self in strife, all honor is thine.
When the tide of Time shall find thee
Drifting, longing, hoping to be free,
Helpless upon its deadly wave,
Trust not till then for one to save.

Dec. 28, 1897.

W. H. R.

The medal is of gold, nearly the size of a government first-class life-saving medal, and is richly ornamented. On its face is the inscription:

"Presented to Frank C. Wilson, D.D.S., by the Southern Dental Association."

On the reverse side is this inscription:

"For the saving of a life at the peril of his own. Old Point Comfort, Va., Aug. 4, 1897."

In presenting the medal Colonel Estill referred briefly to the heroic act it commemorates.

SAVANNAH, GA., January 4, 1898.

Dr. Wm. A. Richards, Knoxville, Tenn.:

MY DEAR DOCTOR—Yesterday I was taken agreeably by surprise when Colonel J. H. Estill presented me with the beautiful medal awarded me by the Southern Dental Association, for my efforts to rescue Dr. Sarrazin, at Old Point Comfort, Va., on August 4th last. I cannot express to you and the Association in this public way my gratitude. My heart seems to swell in my very bosom, and tears come to my eyes when I realize how kind the Association has been to me. I would appreciate the medal coming from any organization, but more especially do I appreciate it coming from an organization of my professional brethren.

I received from the little daughter of Dr. Sarrazin a most handsome silver shaving set as a souvenir, each piece marked with her name and mine, with the date—August 4. Yours very cordially,

F. C. WILSON.

To Produce Spring Temper in Swiss Broaches.

To draw Swiss broaches to a spring temper they should be placed on a steel, iron or brass plate, one-eighth of an inch in thickness and three inches square. This should be held by pliers or forceps over the flame of a spirit lamp, and be kept continually moving over it, so as to keep the plate as uniformly heated as possible. The broaches should be watched very carefully, and when they become of a dark blue color they should be dropped in cold water.

HOW TO PURIFY WAX AND HOW TO MAKE BASE- PLATE WAX.

In the *Dental Office and Laboratory* Dr. Theo. Chupein says a fair equivalent of base-plate wax may be made as follows: Wax that has been used for taking impressions should not be used a second time for the same purpose, unless it is purified. To purify the wax and cleanse it of foreign matter, procure a funnel and cut off the spout. Place an old, but clean, tomato can on your laboratory Bunsen burner, having half filled it with water. Put the funnel in this, letting the edges rest on the rim of the can. Put the wax in the funnel and let the water in the can boil. The boiling of the water will melt the wax in the funnel, and all pieces of plaster, sticks, or other foreign matter will fall or settle to the bottom. When the wax is all melted, let it cool, then by slightly heating the outer edges of the funnel, the cone of wax will drop out. You can now cut off the small end of the cone, which will be found to contain all the impurities.

Now take another clean tomato can, and fill it one-third full of water; place your cone of wax in it, and melt it by boiling the water. The base-plate wax will be made much tougher if some of the wax peeled from the paper—or card wax—on which artificial teeth come, is added. While the wax is melting, prepare a smooth round bottle of a size that will go inside the can in which the wax is being melted. Fill the bottle with iced water and cork it. Make a lather of soap and lather the outside of the bottle. Have still another tomato can half filled with cold water, and place this near the one in which the wax is being melted.

As soon as the wax is all melted, put out the blaze and dip your bottle into the melted wax. Remove it from the can of melted wax and dip it into the can of

water. Plunge it again into the melted wax and again into the water, once more into the wax and once more into the water. These three dippings will be found to make the wax about the right thickness. If it is wanted thicker, one or two more dippings will accomplish this; or if it be wanted *very thin*, one or two dippings alone may be found sufficient.

The wax may now be removed from the bottle by passing a knife around the bottom and down its side, when it can be peeled off, flattened, cut into square pieces and put away for ready use. The bottle is then ready for another dipping, and the process repeated until a sufficient quantity is made.

In melting the wax it should not be permitted to boil, as it would then be frothy and unfit for use. As soon as the wax is melted the blaze of the burner should be extinguished and the dipping begun. The dipping should not be continued too long, otherwise the wax becomes chilled by the ice water in the bottle, which would make the base-plate too thick.

It will be found that base plate wax thus made is thicker around the bottom of the bottle than at the upper margin, because the wax coats more at this point than it does above. This, however, is no disadvantage, as the thinner part of the base wax may be placed towards the back part of the model, and the thicker part towards the front, where the artificial teeth are mounted.

In the absence of card wax to toughen this base a little Venice turpentine added to the melted wax will effect the same object.

While base wax thus made may not be equal to the nice sheets the dentist purchases from the depots, it will be found to subserve every purpose and save considerable in the course of the year. Besides this, the sheets furnished us are often *too thick*, and by having it thinner, for some styles of work, the base wax thus made will often be preferable.

BACTERIA OF THE MOUTH.

In an elaborate and exceedingly interesting article on bacteria of the mouth (*Stomatological Gazette*), Dr. Hart, among other things, says:

"That when grown on meats they produce alkalies; and, perhaps, for the first time you understand why meat-eaters' teeth are so free from decay. Among the Esquimaux, whose diet is almost exclusively meat, decay is almost a thing unknown. This also explains why carnivorous animals do not have decayed teeth. The street dog that lives wholly on scraps of meat has pearly white teeth and no decay; but your fondled, petted pug and poodle dogs, look in their mouths. Their breath is nauseating, their teeth loose, irregular and decayed in every direction. Do you ask why? Haven't you already guessed? Their diet is cake, bread and sweetmeats; rarely do they ever eat meat. These starchy foods stick tenaciously between the teeth, and the bacteria turn the starches and sugars into lactic acid, which dissolves out the lime salts and the albumen matrix of the tooth, thus affording an excellent soil for their further development, and the tooth is soon a mass of decay.

Bacteria when growing on certain soils produce foul gases and other vile products.

Of all the organs of the mouth, the tongue approaches nearest the ideal condition for the growth of bacteria. From time immemorial the coating appearing on its surface has been one of the objective symptoms of disease. This coating is the cause of the vile breath of many individuals. Most of this coating may be easily removed by scraping with an ordinary silver teaspoon. Then, with a napkin between the thumb and first finger, gently grasp the tip and draw it forward, rubbing the surface of the tongue with a soft cloth on which is sprinkled a little common salt, follow this by a thorough swabbing with pyrozone, 3

per cent. medicinal (McKesson & Robbins), and you have effectually cleansed the tongue.

"It is our duty to show our patients how to do these little things. They appreciate these suggestions far more than they do our fillings. Your work is made a success by their efforts. To make the suggestion more forcible, tell them to smell the coating as they scrape it off. It may be the first time they ever smelt their own breath; once will be enough; after that they will clean their tongues.

"The tonsils often cause foul breath from becoming covered with bacteria. He had several cases of tonsillitis that so simulated the formation of abscess of the lower third molar as to deceive, not only an old practitioner of medicine, but also one of our best dentists."

Articulating Teeth.

The following practical suggestion is from Dr. Chupein, in the *Dental Office and Laboratory*:

In mounting the teeth for an entire case, the six upper and lower teeth may be permitted to touch; but when the bicusps are added by slightly separating the articulator by means of the regulating screw in the back, with its accompanying "jam nut," the two jaws of the instrument may be held apart ever so slightly, so as to permit the bicusps and molars to touch, while the six oral teeth are kept apart the thickness of cardboard, which is the proper way to articulate the dentures.

To Remove Collections on Plates.

Plates become coated with sticky, oily, gummy débris. A little aqua ammonia in the water used for cleaning them will accomplish the removal of this. The teeth should, of course, be taken out of the mouth at night.

Pulp Extirpation.

Under this head Dr. Chas. P. Lennox, writing in the *Dental Review*, says he uses successfully 3 per cent. pyrozone. He places a compress on the needle of the syringe and injects the pulp with the solution. His favorite formula is:

Pyrozone, 3 per cent.

Aqua distillæ.....aa 3 ss.

Olea cassia.

Acid carbolaa m. iii.

This is strongly indorsed by the writer and others, but not having tried the experiment, we would be inclined to believe that great pain must result from the injection of any fluid into a sensitive living pulp. Then even if the injection can be accomplished we fail to see where there would be any advantage in this over a solution of cocain used in the same way, which we all know would be effective.

It seems sometimes that we are prone to take up complicated methods to accomplish simple results in our zeal to find something new and original.

H. H. J.

Soft Solder Formulas.

"Fine soft solder" is composed of two parts of tin and one of lead, and melts at 340° F. Ordinary soft solder is composed of one part tin and two of lead, and melts at 441° F. Tin two parts, lead two parts, bismuth one part, melts at 229° F.; tin three parts, lead five parts, bismuth three parts, melts at 202° F. All the bismuth solders are more or less pasty, and seldom flow nicely with any flux in general use.

Solder to Match Color of Coin Gold.

Add one-tenth the weight of good twelve carat gold solder to scraps of coin gold; melt and roll out for use.

The will of the late Dr. Evans, of Paris, will be contested in the courts.

The Hardest Blow of All.

Discussing the relative merits of gold and amalgam, at the Pacific Coast Dental Congress, Dr. Goddard, in *Stomatological Gazette*, is quoted as saying: A homeopathic physician in his city condemns amalgam fillings and red-rubber plates *in toto*, saying that the mercury is doing a great deal of harm. In response to the query, if any one present had ever seen any harm done from the mercury of an amalgam filling, Dr. Ledyard replied, "I once filled a mouth full and salivated the patient." It is parenthetically stated that "laughter" followed this announcement; and no wonder! The most bitter and uncompromising enemies of amalgam have well-nigh exhausted the vocabulary of adjectives in their denunciation of it, yet none have ventured quite so far as to claim or predict salivation as even a possible sequence. Homeopaths have a holy horror of mercury in any form; and the more orthodox are careful not to look in a mirror for fear that the mercury might salivate them. Hence, it is but natural to find opposition to amalgam from that source. But for an intelligent dentist, in the shadow of the twentieth century, to assert a case of salivation from amalgam fillings, is not only calculated to create laughter at home, but to convulse the profession in every latitude and longitude!

Amalgam has been charged with many vices, but this is the most cruel blow of all.

J. A. C.

Modeling Wax.

Best yellow wax.....50 parts.

Venice turpentine.....7 parts.

Lard8½ parts.

Bole, elutriated.....36 parts.

Mix and knead thoroughly.

When you are writing a proper name write it distinctly. Some words we can guess at, and hit very often, but not so with proper names.

A Suggestion to Bridge-Workers.

Bridges to replace the anterior teeth are usually subjected in use to both direct and lateral strain, and in the usual construction of such bridges in gold and porcelain they are weaker than other bridges of the molar and bicuspid type that are subjected to strain in but one direction.

The power developed in mastication varies with the individual. This variation as recorded by Dr. Black is very great, a difference of hundreds of pounds in individual cases, and we all have the practical evidence of this recorded by mechanical abrasion, etc.

A survey of certain systems of crown- and bridge-work, of practical cases, etc., bears out the assertion that the laws governing stress and strain and the resistance of the materials used in bridge-work to withstand these forces are insufficiently known and understood by the specialist, who ought to be as well qualified for his work as the competent civil engineer is for his.

The method of assembling the several pieces to a bridge is the same for all bridges of gold and porcelain without reference to locality. The difference in construction being to flow additional gold where it seems probable there may be increased strain, but the rub of this criticism is that the flowed solder is not equal in strength to a rolled piece of platinized gold, the arms of which extend on to abutment caps or ferrules. This is a means of reinforcement to all anterior bridges that are to be subjected to the outward as well as upward strain which a vigorous person is very likely to bring upon such work, and which will in time be likely to cause fracture, without reinforcement.

Such pieces or straps of gold may be but one-eighth of an inch in width and artistically adapted along the backings of the porcelain dummies at the points beyond articulation of occluding teeth; and such

pieces serve a double purpose, where the alveolar process has receded. They strengthen the work beyond possibility of fracture, and they prevent crowding in of food between bridge and gums as the bridge of ordinary construction does not, and yet, with the surfaces properly finished, the one is as easily kept clean as the other.

Springfield, Mass.

A. M. R.

Moon Blindness.

In the *Atlantic Medical Weekly* is reported a case of moon blindness occurring in a sailor nineteen years of age, who had slept on deck, between 2 and 4 a. m., while somewhere between the equator and 5° north latitude, during the first week in June, 1895. It is the custom of the sailors to carefully protect their eyes from the moon's rays while sleeping on deck, but this man had uncovered his face during sleep. Between 7 and 8 o'clock the following evening, he had difficulty in making his way about, although the moon and stars were shining brightly. For a long time thereafter he was practically blind after sunset. He could see nothing straight ahead, but could dimly discern the bulk of objects to the side of his line of vision, without making out clearly what they were. Recovery was gradual, after cessation from work.

Charity Frauds.

There are many people who abuse medical charity. Dental infirmaries are imposed upon daily by people who are able to pay good fees to reputable dentists. Not long since a man applied to a New York hospital for treatment, stating that he was poor. A concession was made to him, which he accepted and had his eyes treated. It was learned that the *pauper* was a member of a wholesale grocery firm and was worth \$150,000. He was sued for the full amount and had to pay it.

Dr. Amoedo's Implantation Theory.

Professor Amoedo, of Paris, who recently demonstrated his method of implantation of teeth, at the International Medical Congress at Moscow, developed the following theory of the process taking place after implantation: Says the *Oestereichisch Ungarische Vierteljahrschrift*: Osteitis sets in after the operation, followed closely by the formation of lymphoid cells, which connect together and line the alveolus as an embryonic membrane. At the same time little grooves appear on the surface of the root, which are caused by decalcification. At this moment the root ceases to act like a foreign body in the tissue, if the operation was a successful one. The above spoken of lining of embryonic membrane grows into those grooves, becomes vascularized, osteoblasts appear, and the deposition of calcium salts commences, causing in this way a bony fusion of the root with the alveolus to take place.

Dr. Amoedo accelerates this process by putting the roots in a 10 per cent. solution of hydrochloric acid for some hours, causing the surface to be decalcified. The crown of the tooth, if a natural one, has to be properly protected by a cap of caoutchouc. The author prefers the implantation of roots with artificial crowns. The latter enable him to get better match and articulation, and, of course, there is no danger of caries.

F. A. B.

Polishing Instruments.

Place a small quantity of oxide of zinc on a piece of thick, spongy leather and rub the instrument on it, when it will soon take on a fine polish.

Cement for China, Metals, etc.

It is said that litharge and glycerin mixed to the consistency of cream, make a valuable cement for china, stone, iron, etc.

A New Disinfectant.

Protargol is a new organic preparation of silver, which has excellent disinfecting properties and is claimed to be an absolute non-irritant. The preparation is a chemical compound of the silver with a protein substance, containing 8 per cent. metallic silver. It represents a yellowish powder, 50 per cent. of which is soluble in cold or hot water. Heat does not change the appearance of a solution of it, and it cannot be precipitated by albumen, chlorate of potash or diluted hydrochloric acid. Unlike other silver preparations, protargol does not stain the skin or clothes. Experiments made with it by Dr. Benario have shown it to be excellent in the treatment of wounds. —*Zahntechnische Reform*.

The Name of the "Southern."

DANVILLE, VA., January 7, 1898.

There has been some little criticism of the name used by the president for the association now a branch of the "National." Dr. J. Y. Crawford moved the following: "I move that we now declare ourselves a member of the National Dental Association, to be known as the Southern Dental Association." Adopted unanimously.

This is direct from the books of the recording secretary.

E. P. BEADLES,

President Southern Dental Association.

Bite and Impression in One Piece.

In taking plaster impressions for use in making porcelain-faced crowns, Dr. B. D. Wikoff, in *Dental Review*, uses the following method: "After the band is in place, mix the plaster as for an impression, then take a little on the end of the mixing spatula and plaster it over the band and adjoining teeth, then have the patient close the teeth and hold firm until the plaster sets; then you have the impression and bite which can be varnished and placed in an articulating frame as any other bite.

Treating Teeth for Crowning.

At the regular monthly meeting of the Chicago Dental Society a paper was presented on the Advisability of Devitalization, Banding and Removal of Enamel in Crown and Bridge-work. The paper was ably written and well read by Dr. H. J. Gaslee, and was very thoroughly discussed. Most of the members coinciding in their ideas on the subject with those of the speaker. The advisability of devitalization was considered as almost universally the proper practice, excepting in cases of worn-down teeth without bell-shape and with possibly recession of pulp (such as are found in the mouths of elderly persons) where the mechanical part of the work could be accomplished with little danger of destruction of the nerve. It was not thought likely that the death of the pulp would later on be hastened by the isolation or unnatural surroundings of the tooth if crowned without devitalization. Good judgment was the only safe rule to follow. The banding of roots for crowns referred principally to front teeth, and the views of nearly all those who expressed themselves were alike in favor of banding. Where the roots are large and strong, such as could be properly ground in mouths with short, thin lips, the practice of crowning without bands was deemed permissible. In crowning live teeth it was suggested that the teeth be ground but slightly, and the crown be forced down to nearly the gum margin, but not touching it; the circumference being largest a trifle above the gum line, the bands can be driven on in many cases very tightly, possibly making a better joint than if the tooth were devitalized and the crown fitted to conical roots.

H. H. S.

Chicago Correspondent.

Dr. Whitney, a medical missionary in China, is translating Gray's Anatomy into Chinese.

St. Louis Dental Society.

The annual meeting of the St. Louis Dental Society was held in the Lindell Hotel, January 4, 1898. The society will continue to meet in the above hotel on the first Tuesday of each month. Three new members were elected and three applicants presented for membership. The election of officers for 1898 resulted as follows: President, Dr. John G. Harper; Vice President, Dr. M. C. Marshall; Corresponding Secretary, Dr. J. C. Chisholm; Recording Secretary, Dr. W. G. Cox; Treasurer, Dr. A. J. Prosser; Committee on Ethics and Elections, Drs. W. N. Conrad, J. P. Harper, J. G. Pfaffe; Committee on Publication, Drs. F. F. Fletcher, J. H. Kennerly, Emma E. Chase. Next meeting will be held on February 1st, at which time the newly elected officers will be installed.

Sulphuric Acid in Mixing Amalgam.

While attending the Blue Grass Dental Association, I saw a demonstration of the use of sulphuric acid in mixing amalgam. I have tried it a number of times and have secured good results. Take a five per cent. solution of the acid and pour on the amalgam for the filling; wash it thoroughly, then add the mercury, of which I think it requires less, wash it well and squeeze out the excess of mercury. The results will be pleasing.

H. A. SMITH.

Making Cusps.

There are many ways of making cusps for crowns, but the handiest and best thing that we have used is the steel die-plate of Dr. Mitchell, made by the Ransom & Randolph Co., of Toledo, Ohio. There are thirty-six shapes in it, and each is beautifully finished. A solid piece of gold can be laid on it and swaged into solid cusps.

THE
American Dental Weekly
 ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription \$2.00 per year; \$1.00 for six months—Including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, January 13, 1898.

Is the Dental Profession Crowded?

This is a question often presented in private conversation between dentists, and sometimes at dental meetings. That the profession is crowded hardly needs to be affirmed. Only a few more years and every nook and cranny of the country will be jammed as are now the towns and cities.

From Canada comes the word that they are overflowing and still they come. The dental statistician will say that a certain per cent. of the older practitioners die every year; and that a certain per cent. of the recruits practice only a little while and quit. And yet there is a large increase in the ranks every year. The State of Georgia added eighteen per cent. last year. The overcrowding of any business sharpens competition. Sharp competition tends to lower prices.

The professions are not exceptions to this rule, certainly the dental profession is not,

for a large part of the world does not yet look upon it as one of the learned professions. And will they do it so long as teeth are held in the jaws by gomphosis, and can be removed without physical disability following?

A dentist's standing is rated by the public by the "sticking of his fillings." His scientific attainments go for naught if his mechanical ability is not sufficient to make fillings "stick." These truths may be humiliating, but they are truths nevertheless, and tend to prove that it is easier to overcrowd the dental profession than that of medicine, though it is almost crowded to suffocation.

The cutting and slashing of prices tend to lessen professional enthusiasm and ambition, and if carried far enough, result in charlatanry.

Is this pessimistic? We think not. One only needs to turn to the advertising pages of the journals to see the number of dentists who are now supplementing their living by the manufacture of articles for sale. We are not alluding to the classes but to the masses. Often have we heard Dr. Crawford, on the floor of convention halls, declare "There are not enough dentists to keep the tartar off people's teeth." That is, provided the people want the tartar taken from their teeth. As our Canadian correspondent writes: "The question of overcrowding is usually switched off to educating the people up to a sense of dental appreciation." When they are so educated, then there may be room for the annual 18 per cent. increase. Five years' output at that rate will double the number of dentists. Can any one predict other than a mere existence for the mass of dentists? We are told that the present average earnings of the profession in Chicago is about \$1,200; which is not the average salary of first-class salesmen.

We shall have to quote Dr. Crawford again, as he stands as an ex-professor, and

has been twice president of the American Dental Association. Not long since he made remarks which do not exactly conform to those quoted above, but which bear out our views exactly. He said in speaking on the subject of dental education: "The student ought to remain longer in college. His future occupation offers a barrier to all subsequent intellectual development." Why? "Because he is going to have the hardest work to make a living. The most of those that I know are poor."

Not enough dentists to keep the tartar off people's teeth, and yet the young dentist will have such a struggle to make a living, he will not develop mentally. 'Tis a sad fact that the most of them don't grow intellectually, but are content to remain as they started in professional life.

When a condition exists there must be a reason for its existence. One or more of these reasons we will give in a subsequent issue of *THE AMERICAN DENTAL WEEKLY*.

Flagg and His Critics.

Dr. Black's recent investigations of amalgam alloys have evoked a perfect flood of discussion, and revived the question of plastics in general; and, incidentally, Dr. Flagg's theory and practice have not been spared in the discussion.

This is specially noticeable in the proceedings of the Pacific Coast Dental Congress, where several of the doctor's students have "fallen from grace" and "renounced the faith."

The "apostle of plastics" is at present engaged in giving the final touches to a revision of his text-book on this subject, and has not time to notice his critics; but it is fair to assume that in due time the doctor will pay his respects to the prodigals and others. Then you may look out for a sample of "English as she is spoke" and a general pyrotechnic display. J. A. C.

Meeting of the Southern.

St. Augustine, the place of meeting of the Southern branch of the National Dental Association, is one of the most noted places on the American continent. It is exceedingly rich in historical events. It is the oldest town in the United States; was founded in 1655, making it 243 years old. It has some of the finest hotels in the world, and is a winter resort for thousands and thousands of people. Dentists north, east, west and south cannot find a better place to spend a midwinter vacation. One can go to sleep in a sleeper of the Southern Railway, when everything may be wrapped in the fast embrace of the ice king, and awake in the land of flowers, of beautiful palms, of the delicious orange. The Southern Railroad, which is one of the largest systems in the country, and which ramifies the whole southern country from east to west, with ample northern connections, will take you from your door and land you in St. Augustine, a veritable paradise on earth. Our friends of the cold West and North should take this occasion to pay us a visit.

Painless Extraction of Living Pulp.

Much has been said and written since cataphoresis came into common usage regarding the painless extirpation of living nerves by this process. The opinion is general that cataphoresis is essential in such an operation. We were of the same opinion until recently, when our machine broke down just as a case came in which seemed to demand immediate extirpation. In the emergency it was determined to see what could be done by other means. Crystals of cocaine were placed in the cavity, moistened with a drop of water and allowed to remain five minutes. The pulp was then painlessly exposed with a sharp excavator, handled carefully. A few more crystals were moistened and laid over the bleeding pulp, which were

gradually worked into the canal with a Donaldson's canal cleaner. This procedure consumed about five minutes and the nerve entire was removed, without the slightest pain, in ten minutes from the beginning of the operation.

This operation has since been repeated successfully.

From these few cases it seems to be a conclusive fact that where nerves are actually exposed or can be made so, they may be removed with much less pain, trouble and inconvenience than by the slow cataphoresis method.

H. H. JOHNSON.

It Has Arrived.

And it's handsome and courteous. We mean the *Indiana Dental Journal*. It is edited by George Edwyn Hunt, M.D., D.D.S., and is published in Indianapolis, Ind. Price, \$2.00 per annum. Every dentist in Indiana should subscribe, and all respectable dentists outside of Indiana. Success to the *Indiana Dental Journal*. Editor Hunt starts well. There can't be too much good reading matter.

"OUR FIRST NOTICE.

"There is to be the *Indiana Dental Journal*. Dr. Hunt will, we suppose, be editor. THE AMERICAN DENTAL WEEKLY will not fail to say 'howdy' when it calls at this office, as some of the monthlies have failed to say to THE WEEKLY. There is nothing small about us."—AMERICAN DENTAL WEEKLY.

"Now that's the kind of a man we like. If the *Indiana Dental Journal* had been on tap before THE AMERICAN DENTAL WEEKLY was born, we would have uncovered our think-tank and allowed the sportive winter zephyrs to play hide-and-seek with our blonde curls every time we met the postman who brought us the first copy. But, as it is too late for that, we acknowledge the preliminary "howdy" of Brother Catching, and show our thorough appreciation of his good will by making clippings from THE WEEKLY."

A Diagnosis.

DEER LODGE, MONT.

Editor American Dental Weekly:

A young lady visiting in this town called at my office, wanting me to give diagnosis of her dental trouble. She gave me the history and symptoms of the case. After examination I gave diagnosis, and what would be my treatment. I will give history, symptoms, diagnosis and treatment to THE AMERICAN DENTAL WEEKLY, asking if I am correct.

The shooting pains in her teeth were not constant, were more frequent during storms accompanied with thunder and lightning. The pain would shift around in different teeth. At one time the pain had occurred so often in a right and left upper bicuspid, she had the two extracted, giving no relief, but shifting the pain to other teeth. On examination I found from fifteen to twenty gold fillings, and about the same number and amount of amalgam fillings. My diagnosis was—nerve pain, caused by an electric current, the current being produced by the different metals, forming the positive and negative poles, and together with the saliva, forming the battery. I gave as my treatment: Remove all of the alloy and replace it with gold. If there were any cavities not favorable for gold, fill them with cement.

M. J. B.

A New Year's Resolution.

"I shall endeavor to keep abreast of the sayings and doings of the dental world by subscribing for THE AMERICAN DENTAL WEEKLY." That's a good resolution; and at the end of another twelve months you'll not only subscribe again, but will urge your neighbor to do so. It will go to you 52 times a year.

J. A. C.

Fifty-one metals are now known to exist; four hundred years ago only seven were known.

National School of Dental Technics.

Dr. Wm. Crenshaw, Dean of the Atlanta Dental College, has returned from Chicago, where he has been in attendance upon the meeting of the National School of Dental Technics. Dr. Henry Morgan, President, presided.

Twenty odd dental colleges were represented by some fifty teachers, whose purpose was to discuss the methods of college teaching and the perfecting of the new system of manual training known as Dental Technics.

Among the many attractive and valuable features of the meeting, Dr. Crenshaw was much impressed with Dr. G. V. Black's paper and illustrations, setting forth his newly devised method of Instrument Nomenclature. In the language of the Doctor, this was the "Gloria in Excelsis" of the occasion.

Exhibits from different schools, showing carefully graded and systematized technic courses were made, and were, in themselves, very helpful toward further perfecting of this course.

With a party of visiting dentists Dr. Crenshaw witnessed Dr. T. W. Brophy remove the second branch of the fifth nerve to correct a neuralgic disturbance.

Dr. C. R. Brophy, a brother of Dr. T. W. Brophy, demonstrated his new furnace and method of casting aluminum plates, and promises in the near future to give it to the profession. From the highly satisfactory experiments shown, a revolution in dental prosthesis is at hand. This must indeed be welcome news to the profession at large, who have long wanted to preach the funeral of red rubber.

J. A. C.

I consider THE AMERICAN DENTAL WEEKLY a great boon to the profession. I have already reaped much good from the perusal of its pages.

E. L. HANES.

Griffin, Ga.

A Hint in Hygiene.

A great many teeth are injured by improper brushing and by the use of improper brushes. The cross movement is nearly always given the brush, which is conceded by every one to be wrong, and perhaps every person who uses the tooth-brush at all has been cautioned against using it in that way, but perhaps a greater damage is done to the teeth by the use of brushes too stiff. Stiff brushes may be used by such persons as only use them occasionally, such as on Sundays and legal holidays; but they will not do for the person who uses the brush regularly every day, once or twice; for such people a soft brush is indicated. It has been my unpleasant duty to make large, round gold fillings in otherwise beautiful central incisors, which become necessary from no other cause than the improper use of an improper brush.

ATKINSON.

Disk Lubricant.

Tell your readers to use paraffin instead of oil or vaseline or glycerin for lubricating paper disks, finishing burs and stones at the chair. It is much neater as well as more efficient. Simply touching the revolving disk or stone with a block of the paraffin is sufficient.

C. B. ROHLAND.

Alton, Ill.

Why is It?

Why is it that some men appear so much in dental proceedings and never appear autographically in the journals? Are they, as Job said of one of his comforters, full of wind, and east wind at that?

I am very much pleased with THE AMERICAN DENTAL WEEKLY. It is in such democratic, pleasing contrast with the "standard" aristocratic publications, in which the first person singular is so painfully in evidence.

R.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., JANUARY 20, 1898.

NO. 19.

METHOD OF SHORTENING THE PERIOD OF PAIN DURING THE ACTION OF ARSENICAL APPLICATIONS.

The action of arsenious acid on the dentin and the pulp, and a method to shorten the pain during its time of application, was recently discussed in a paper read by Dr. Rjabkoff before the International Medical Congress, section Odontology.

Says he, in the *Oestereichisch-Ungarische Vierteljahrsschrift*:

The pain which is caused by the application of arsenious acid on pulps in a certain state of inflammation can often become very persevering. The same has been attributed to the caustic action of the acid, which one tried to alleviate by the addition of some astringents and anesthetics. After long experimentation with pastes of different compositions, it was found that those admixtures did not improve the action of the acid; on the contrary, the same had become uncertain and weak. The disturbing influence of these admixtures can be proven in the following: Cocain causes the pulp to dry up and become anemic. Now, if it is admitted that it is absorbed by the pulp before or together with the acid, the above must be the consequence. The action of the acid is then held back, because it is a fact that devitalization takes quicker steps in pulps rich in blood.

Again, the powdery admixtures, as morphine and tannin, will always be on the surface of the paste, owing to their specific

lightness. Only a little of the acid comes in contact with the pulp, therefore Dr. Rjabkoff tried to find out other means to alleviate and shorten the period of pain. Relying on the fact that arsenious acid causes the painless devitalization of sound, entirely exposed pulps, he came to the conclusion that in cases of pulp it is the presence of an intervening layer of tissue that must prevent necessarily the penetration of the acid deep into the pulp. The acid, coming in contact with the layer, will be absorbed by same; a scurf will be formed, which holds back its action for a time, the duration of which depends entirely on the thickness and structure of the inflamed tissue, as also on the pureness and consistency of the paste.

Should now, as it occasionally does, the scurfy layer of tissue rupture and the mass of paste get below it, in direct contact with a larger surface of the pulp, then a quick and painless devitalization takes place.

Only in these cases the pastes with admixtures have given satisfaction, and they have led to their general use.

The removal of the intervening layer of inflamed tissue would cause the acid to act much quicker. But as it is in most cases utterly useless to even try to remove it directly, on account of intense pain, Dr. Rjabkoff succeeded in the following way: He applied a good paste for ten to twenty minutes to the inflamed tissue; with a probe he then destroyed this layer, which could be done with very little pain, because it was perfectly devitalized. He then brought more paste on the probe in direct

contact with the pulp mass, and found that the pain was not as intense any more and ceased entirely after the cavity had been closed up air-tight. The pain usually agonizing patients for hours had been reduced ten to twenty minutes, which the writer claimed a big success. F. A. B.

A SUBSTANTIAL PORCELAIN FACE CROWN WITHOUT A DISPLAY OF GOLD.

In making lower bicuspid and molar crowns with porcelain faces, the effect of the facing is almost entirely lost, from the fact that the cusps show so much more than the facings. To avoid the display of gold, and to secure a neat, easily-made and substantial piece of work, the following method may be used: After preparing the root in the usual way cut back the labial or buccal side of the tooth as though you were preparing for a thick porcelain face. Make the band as for a "shell crown." After it has been properly fitted to the root remove it and cut away the labial or buccal side as you did with the tooth, leaving a narrow band at the gum-margin. Select a rubber tooth of the proper size and length to fit in the remaining part of the band, giving the proper articulation. Grind the shoulder off of the back of the tooth at the point where the pins enter; also grind off the heads of the pins. Next wrap the entire tooth (except the grinding surface) with very thin gold (or platinum), puncturing holes for the pins to enter and making a lap of the gold on the back of the tooth between the pins. Then cut away the surplus gold beyond the end of the tooth and lay it upon asbestos and solder without investing. The tooth thus covered is placed in the band and soldered, after which the gold covering the face is cut away, making a crown with porcelain face and cusps.

The rubber tooth rests within a pocket of gold and does not rely on the pins for sup-

port. The gold being soft it can be closely adapted to the tooth, making a very neat and cleanly piece of work.

If it is desired, a Logan pin can be clasped between the pins of the tooth, before making the first solder, and secure a pin for the crown without any additional work.

H. R. JEWETT.

THE COUNTRY DENTIST.

It is really refreshing, at times, to read something like the following, which is the best production on the country dentist that we have seen. It is by Dr. W. W. Belcher, in the *Dental Practitioner and Advertiser*, he says:

O solitude! where are the charms
That sages have seen in thy face?
Better dwell in the midst of alarms,
Than reign in this horrible place.

—Cowper.

The trials and tribulations of the dentist in the country have received not a little attention; but I doubt the ability of any pen, however gifted, to portray them in all their vividness. Truly, his is an isolated existence; a feeling of loneliness and in times of depression, a fear of inability to cope with all the ills that are thrust on him, pervade his being. There may be others of the same calling near by, but in the country every office is a close corporation, and the dentist sufficient unto himself. One is dependent on his own exertions, and cannot choose his cases or his people; everything is fish that comes to the net.

The neighboring dentist does not hail your arrival in his chosen field with any great demonstrations of joy; in fact, your presence is regarded as an intrusion. You may have most excellent ideas on professional ethics, but he has none; so he forgets your office address, and does not return your first call, and is surprisingly oblivious of your presence when you meet. But all things come to him who waits, and the fickle goddess of fortune smiles, and the town

speaks of "our dentist." He is elected president of the local hose company, is recognized as an authority on matters pertaining to baseball, and his wife presents him with twins; but he tries to bear his honors modestly.

Prosperity only widens the breach between you, and your confrère speaks of you as a "young man," as though it were a crime, and when he makes a success of your ill-fitting denture, how he exults in secret! A present of five hundred dollars out of a dental-depot stock would not equal the satisfaction he derives in "doing you." It is a rough school, but a thorough one.

Far removed from the dental depot, the country dentist cheerfully overcomes difficulties that would drive a city dentist to despair. Victor Hugo, in his "Toilers of the Sea," must have copied closely his principal character from a near by country dentist. He sandpapers teeth to alter the shade, backing them with gold to give a yellow cast, with platinum to produce a blue tint, uses rubber teeth for his bridge cases by drawing down the pins and grinding off the shoulder, to produce the desired "flat back." He "cracks" teeth to obtain platinum, at a pinch melts the same by means of a cylinder of gas and a two-dollar blow-pipe, constructs instruments for his special needs, and makes nerve broaches out of needles, trusts in the Lord, and does the best he knows how.

"He who does the best his circumstance allow
Does well, acts nobly, angels could do no more."

Lectures or exhibitions of merit are conspicuous by their absence; church going is the popular diversion; should he miss two consecutive Sundays, his patients remind him of his absence, and of the fact that his competitor attends the same church regularly. Be he chaste as ice, he cannot escape calumny—his shortcomings and those of his wife and family are public matters, and furnish a topic for all the elderly ladies at the sewing circles. He must contribute

to the "Father Matthew's ball," "Odd Fellows' dance" and baseball team, and should his dear friends start a subscription for the benefit of the man in hard luck, he carefully scans the paper, ascertains the amount of his competitor's gift and goes him one better. He attends the church fair, and finds that it cost him ten cents to get in and ten dollars to get out. His living is part of his capital, and he must keep an establishment equal to that of the dry-goods merchant, and with all this people wonder what Dr. Blank does with his money.

He works for the whole family and takes his pay in trade. Even the man who keeps a ten-cent store contracts a bill of forty dollars, and is surprised and offended when you ask for part cash. It is a business sin to be caught buying anything out of town; therefore, he must patronize the home merchant to help himself professionally, and pays ("in trade") \$4.00 for a tablecloth, and next week sees a better one advertised for \$1.58 in the city papers. To be seen on the streets during business hours is to advertise the fact that he is unemployed. Therefore, should he desire a half-day off, he hies himself away to the neighboring town, calls on the dentist, swaps lies, and compares notes on the hard times and the tight money market.

Oh, yes; he has plenty of fresh air, and can also keep chickens and grow his own "greens." He pays only \$144 per year for his office, while his city brother pays \$350, with heat, light and service; but he has a gas meter, pays \$2.50 per M., and labors to keep the bill under \$15 per quarter. He must clean, or hire cleaned, his office; he burns a coal stove and empties his own ashes. He has a practice of \$2,500, which was the same last year, the year before, and will never be more, although it will very likely be less, for there are other dentists, and while there may be no other excuse for their being, they, too, must live.

He is content to glean what little he can from the journals, attends the society meetings semi annually and calls on the city brethren. It is a case of "hail and farewell" in the same breath; but he returns home with new ideas and an extra pair of wheels. But a week finds him in the same old rut, pegging away. Time—Oh, Time! finds him a mossback, dyed-in-the-wool country dentist, with no desire but of the moment and no hopes of the future. Small wonder that he becomes a "crank," plays with "the chips that pass in the night," or takes a drink as a relief. He grows old, becomes shiftless in dress, sweeps the dirt into a corner of his office, and at last he dies, has a lovely funeral, and is buried by the Odd Fellows.

Then all his good qualities are brought to light, his fillings are exhibited with pride to the "new dentist," who thereafter sings small and wonders how he did it. His competitor; he also praiseth him.

This may be a poor showing; but, after all, is it not quite as good as that of the average country resident? The country dentist has lived a clean, reputable and wholesome life. It may have been a petty one; but it is the life of those with whom he has been associated. He may have been obliged to descend to little meannesses; but that is because they were practiced on him. He has not committed any great crimes; he has never been a dissipated man; he has paid always one hundred cents to the dollar, even if he has been obliged at times to scheme to accomplish this. He has robbed no one, and he has not ground the face of the poor.

The world is the better for his having lived in it. He has materially contributed to the sum of human comfort and human happiness. He has raised a respectable family to maintain his good name, and to perpetuate his virtues, which, if they have not been conspicuous, have at least been many. He has kept his wife in comfort,

and his children are fairly well educated. There is quite enough for an inscription upon his unostentatious tombstone in the village churchyard, and there are many who read it with a benison upon his memory, and with a tender thought of his plain, modest, unobtrusive virtues; and, if they are at all acquainted with literature, they think of the poet Gray, and mentally repeat the lines so applicable to him and to many of those who lie about him:

Far from the madding crowd's ignoble strife
Their sober wishes never learned to stray;
Along the cool, sequestered vale of life
They kept the noiseless tenor of their way.

PULP MUMMIFICATION, OR SCIENCE AND PSEUDO- SCIENCE.

It occurs to me sometimes that the poet must have heard some of our scientific(?) men speak when he exclaimed "Things are not what they seem."

In the November number of the *Cosmos*, volume xxxvii, was an article by Dr. Theodore Söderberg, of Australia, on Pulp Mummification. A few men in the profession, willing and free to admit their inability to scientifically remove all nerves and insert the proper filling material into all ramifications of the many-rooted molars, gave credence to his theory, it being an improvement on that of Herbst and Witzel.

No sooner had Dr. Flickinger, of St. Louis, and Dr. DeFord, of Cedar Rapids, spoken in commendatory terms than we hear others say, "The man who uses this method is too lazy to work." "There is no need of this method." "It is illogical and absurd." "Shiftless and impracticable." "Would not oppose it because nobody would practice it." "Unscientific." "The opposition to it is not strong enough." "We have other methods." "The orthodox method is the best." "Can fill roots better in the mouth than out." This opposition

doubtless made the advocates feel "sorry they spoke," and scared many away from what is more scientific than the above quoted opposition.

It was never claimed by Dr. Söderberg that you could take a handful of the paste, throw it at the patient and have as a result all the work scientifically done that might be required. But when it is necessary to kill the pulp of a molar, apply arsenical paste. In forty-eight hours this can be removed; then with bur of engine prepare cavity for permanent filling, drilling into rootcanals deep enough to make good covering of mummification paste, pricking it into remnants in nerve canal, this to be covered with cement to or above floor of chamber. Then insert permanent filling. If there should be a flow of blood apply pyrozone before making application of paste. Of course it is necessary to apply the dam as in all fillings, and the work should be thoroughly done. After using this method three years with satisfaction to my patients and myself, it is a pleasure to recommend it, the opposition notwithstanding.

Why should oxychloride be advised in nearly exposed pulps? The scientific men say that in case the pulp dies it will be mummified and remain in that condition five, ten, twenty years probably. Then why not mummify with a more reliable medicament? If drilling into canals several years after this treatment reveals the freshness, dryness and health of the parts, why say it is unscientific?

No coagulant should ever touch the inside of the pulp chamber or canal that is in a state of decomposition. Frequently the very purpose we hope to accomplish is made impossible by such treatment. Only use Söderberg's treatment, in cases where you kill the pulp a day or two before, being sure there has entered no foreign substance to cause a septic condition. It would be well if the article referred to be read again,

if any would accept this treatment, the formula of which is

Dried alum,
Thymol,
Glycerol.....aa 3 i.
Zinc oxide q. s. to make stiff paste.

At first this seemed to me a feasible theory; demonstration has confirmed it for three years, and why should future trouble at any time be more likely than with other methods?
W. H. WEAVER.

GOLD FILLINGS IN INCISORS.

My Dear Philip:

Since you have asked my views of certain subjects in dentistry, I have concluded to take first the subject of gold-filling, as there is where the dentist has for a long time been called to do his most important and artistic work, not meaning to say there are not other operations in dentistry which require an equal if not a greater amount of skill, but certainly the most important operation is that which will save a tooth, and it requires a greater skill to make a filling of gold than with any other material at present used for that purpose. We will suppose the incisors have caries on their approximal surfaces. The first thing to do is to separate them sufficiently to permit easy access to the cavities. Now just how this is best accomplished is a matter upon which operators differ, mainly in two respects: One will cut away from the lingual aspect until the cavities are sufficiently exposed and fill them through the space thus obtained, thus concealing the gold from the external and having what are termed self-cleansing spaces; the other with the idea that nature has given to the teeth the contour best suited to their function, will separate them by pressure applied, either by screws by which it is accomplished at one sitting, or by a slower process of wedging them apart with cotton or other material placed between them and removed and renewed from day to day until sufficient

space is provided. Whichever method is employed—remember the degree of space obtained will have much to do with the success of the filling. In filling these teeth the material must always, or nearly always, be introduced from the labial or lingual aspect, which in the finished case will leave the gold exposed mostly to view in the direction from which it was introduced.

Now, to all esthetic tastes, gold is abhorrent in the front teeth, and there can be no question that a filling made in such a way that the tooth does not appear to be filled, is better placed and more artistic than the same filling would be if made so as to be exposed to observation.

Then again it seems that a filling packed against the labial wall is far more liable to resist the recurrence of caries than if the labial wall be cut away and the filling packed against the lingual wall. This may be accounted for by the fact that it is more easily kept clean, a fact which is readily demonstrated; but as a matter of esthetics, if the labial wall is so thin that the gold will show through and present the appearance of being a filling concealed, or if the labial wall is involved only enough for the gold to present the appearance of a decayed tooth after it is filled, it were better that it be cut away and let the filling show plainly what it is, as a nicely finished gold filling, clearly exposed to observation, presents a neater appearance than does one partly concealed but which leaves a doubt in the mind of the observer as to whether the tooth is filled. The space having been obtained and the scope of the operation determined, the preparation of the cavity is presented for consideration for the reason that it is estimated that more fillings fail for want of proper care in this particular than in the actual manipulation of the gold.

All defective and unstable tooth structure must be cut away so there can be no doubt that that left can withstand the pressure necessary to consolidate the gold.

The cavity must be so shaped that the plugging instrument used will reach every part of it, and reach it in such a manner that the consolidating force can be applied with all facility. The margins of the cavity must be well rounded and made smooth, free from all fragile edges, and if a line of chalky enamel is to be seen, which most frequently appears at the cervical margin, it must be cut away if requisite that it be cut beyond the gingivæ, for while this line is not in the cavity, it has in fact already disintegrated, and it would only be a matter of a short time when it would leave a new cavity about the margin of the filling.

Retaining points or grooves may be made for the anchorage of the gold; these are made not necessarily deep. It is only necessary that there should be two opposing points in the cavity into which the gold may be packed, though a groove extending throughout the circumference of the cavity is admissible if the situation favors it; but these grooves or pits need only be deep enough to afford lodgment for the first pellets of gold; any deeper than this will be a positive waste of tooth structure.

The operation has now reached the point when the gold is to be placed and the filling made. Let it be certain that the pits and grooves are well filled and that the gold is packed carefully against all of the cavity walls. This must be done with great care, for here is the source of many failures. If the gold is properly adapted to the walls of the cavity, it matters little so far as utility is concerned, if it should be pitted in the center.

I will not go further into the process of filling at this time, but will some time in the future take up other operations which may be of interest to you.

Observe then these points:

Don't let the gold be visible on the anterior if it can be avoided.

Don't try to preserve too frail tooth

structure with gold. Let all parts of the cavity be easily accessible to the plugger.

Let the retaining points be as shallow as possible. Be sure the gold is well packed against the cavity walls.

Be sure to have sufficient space to operate.

D. D. ATKINSON.

TWO OPINIONS OF TARTAR.

While the younger element are engaged in unraveling the problems of cataphoresis and other *fin de siècle* subjects, the grandpas are talking in a most interesting vein about old-fashioned things.

Dr. Peirce, in *International Dental Journal*, speaking of salivary calculus, says: He wanted to make allusion to one item touched upon, and that is the matter of tartar or salivary calculus. He thought the dental profession was quite lax in expressing that properly. Nearly every teacher has spoken of it as an amorphous deposit. He had made a number of experiments in the past year trying to ascertain whether the tartar upon the teeth was simply a precipitate of the lime in the saliva, or whether its deposition was due to organisms in the saliva. A quantity of saliva placed in a vessel outside of the mouth, although it may be saturated with lime, will not deposit that lime in the vessel, but if we can place in the saliva organisms such as the leptothrix, he was satisfied we can get a deposit on the sides or bottom of the vessel.

He believed the deposition of lime upon the teeth is due not only to the fact, which is essential, that there must be lime in the saliva, but also to the fact that we have organisms which are instrumental in its deposition. He took two patients, in whose mouths there was a rapid and profuse deposition of tartar upon the teeth. He asked them to keep their mouths as pure as possible with a strong antiseptic for a limited time. The care exercised in washing the mouth or keeping it saturated with a strong antiseptic without interfering at all with the

natural secretion of the saliva from the glands prevented the deposition of calculus on the teeth. That satisfied him that the deposition was not only due to the presence of lime in the mouth, but also to the organisms in the mouth.

Professor McQuillan prepared a paper on the subject of tartar in the mouth being a result of some organism, but he did not sustain his theory, because he could not discover that organism. Microscopic investigation did not discover anything akin to the coral organism. If any one will take a patient from whose mouth he is in the habit of removing tartar, and have the patient use a strong antiseptic, the tartar deposited will be found to be of a minimum quantity. He used boracic acid and gaultheria. It destroys the microorganisms, and prevents them from depositing tartar on the teeth. Salivary calculus is due to an organism as well as the lime in the saliva.

Dr. Barrett does not agree with Dr. Peirce, for two or three reasons. How can a microorganism produce any kind of deposit or any kind of change? Precisely as a potato decomposes the ground in which it is, so the microorganism decomposes the medium in which it grows and excludes certain of the atoms of oxygen or carbon, taking out whatever it wants for its own organism; these excluded organisms make new organisms and produce the characteristic by-product. That may be a ptomaine of such exceeding power and strength that we have scarcely any conception. Take a single ptomaine and compare it with any of our poisons. One-millionth of a grain is poisonous in the bacillus of tetanus. This is always, so far as he knew, in the presence of organic matter. The coral is referred to, but it is built up in inorganic matter; that changes the relation. The change that takes place is utterly different in calcic material from that which takes place in organic matter. In the presence of albumen, calcic matter assumes a definite, conce-

trated form, and it becomes the calcoglobulin of the salts of the tooth. In inorganic matter it is different. We have the carbon dioxide of the breath meeting the saliva, which contains the lime, and in its presence there is an amorphous precipitate, and so the tartar is amorphous in its character.

Holocain, a New Local Anesthetic.

The muriate of holocain, which is derived from phenetidin and related to phenacetin, has not been used in dental operations as yet. But favorable reports have been made by many physicians, among them Dr. Natanson, of Moscow, who used it in eighty operations on the eye during one and one-half months. Says he in the *Excerpta Medica*: "In operations on the eye holocain has many advantages over cocain. It acts in weaker solutions and quicker than the latter. One or two drops of a one per cent. solution brought to the conjunctiva of the eye were sufficient for all purposes. This solution is effective one to one and one-half minutes after application, and ten minutes is the average time of its effect. If applied twice or three times with five-minute interval, complete anesthesia can be extended to nineteen or thirty minutes respectively.

Besides many other advantages pertaining to operation on the eye, the preparation is very cheap and durable. F. O. B.

Hearing Restored after Twenty-Five Years.

Bennet mentions a case in his practice where a lady, fifty years of age, who had been deaf for twenty-five years, had her hearing restored immediately after the extraction of a number of roots. Among these were the roots of the upper wisdom teeth, which were badly exostosed, and when extracted she felt as if relieved of a pressure which she had felt for a number of years.

Vulcanizing.

Did you ever notice that sometimes a little mercury is left up in the thermometer of your vulcanizer after it has cooled off? If so, then in vulcanizing, allowance must always be made for the amount left. For instance, if you want to vulcanize at 320° and there is one centimeter of mercury left above that point, the mercury rising must fall short of 320° by that much in order to give the correct registration. If the rising mercury reaches the 320 mark you will be vulcanizing at a degree one centimeter above that point. There is just enough mercury put in the thermometer to register properly as the temperature is increased; if any of that mercury be left when it will not be affected by the heat, it must be accounted for in computing the temperature of the vulcanizer.

ATKINSON.

Handy Insulator in Cataphoresis.

After rubber dam has been applied, cut a strip of dam which when stretched twice its length will be broad enough to reach from the gum to and overlap the crown of the tooth opposite the cavity which you wish to fill. Now pass one end of the strip under the clamp when it rests on the dam, stretch strip and pass between the teeth, covering the one you wish to insulate and back to and under clamp on opposite side. No amount of friction of instrument against the dam while applying current will rub it off as is the case with chloropercha.

W. H. RICHARDS.

Clean the Commutator.

Does your electric motor ever fail and cause you to think the charge is faulty? If it does, try rubbing lightly the cylinder of the commutator with a piece of chamois skin slightly oiled with clock oil. The current is taken more freely from the brushes.

W. H. WEAVER.

THE
American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

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Subscription \$2.00 per year; \$1.00 for six months—including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, January 20, 1898.

Cane Sugar.

We are often asked if sugar or candy is injurious to the teeth. And we have always answered that pure cane sugar and candy, eaten in moderation, is a real benefit to the general system and does no harm to the dental organs. The only way that it can injure the teeth is through the general system, and that is by allowing a child, for instance, to feast upon it to the exclusion of other diet. Here is what Dr. Barrett says about it:

"There is a common belief that this is injurious to the teeth, and that sugar candy is positively destructive to them. No greater mistake could well be made. Cane sugar is not only unfermentable before it is changed by the action of the digestive ferments, but it absolutely prevents fermentation. The housewife preserves her fruits and her delicacies by its means, and sugar-cured meats are well known to every one.

If candies are pure, and are made from cane sugar, they will be preservative of the teeth, and may be recommended for that purpose, provided always that the teeth are properly cleaned after they have been taken, as they should always be after eating. It is the adulterated candies that do injury to the teeth. The use of too much sugar is bad for the digestive organs, and through them may act deleteriously upon the teeth, but these organs were never directly injured by pure sugar or sugar candy."

A Question of Ethics.

"Chevalier," in perfect good temper, writing from New York to the *Dental Digest*, wishes to know if the elaborate illustrations of dental offices that have recently appeared in a certain dental journal, were a violation of professional ethics. Among many pertinent questions he submits the following:

"Is it good taste to publish such articles, which at once bring out in bold relief all the little differences between offices? Does it promote brotherly feeling to cause a sigh of regret, discontent, what you will, on the part of the less fortunate practitioner?"

"Where shall the line be drawn between thus publicly attracting attention, even though it be in a dental journal, and the 'animated' picture of a 'dental parlor' in the windows of the large department stores? It strikes me that it's rather a close shave."

Some one has said that "morality was a question of latitude." To somewhat paraphrase this, we might say that professional ethics, while not subject to latitudinal construction, are, nevertheless, somewhat defined and influenced by environment.

If by such illustrations referred to somebody adds largely to his bank account, and is in time accounted "a man of means," what does he care for ethics? His money

will offset any criticism as to his methods of getting it, and so he is losing no sleep by the censors' cry of "non-ethical."

"Chevalier" has caught on to a "live wire," and we deeply sympathize with him, but hope no one will cut off the current until his agitation of this new innovation(?) of the code shall have been amicably settled.

Here's to your success, Chevalier!

J. A. C.

"The Fighting Editor."

Dr. W. C. Barrett, "the fighting editor," as Dr. Harlan terms him, has his war paint on and is tearing up the earth in and around about Buffalo, N. Y. He is as mad as a "March hare" because the Southern Dental Association exists as a branch of the National Dental Association, and calls us some ugly names. Well, old man, just cool down and come to the meeting of the Southern at St. Augustine, Fla., February 22. (That you may remember the date, it is the birthday of the father of our country.) We will feed you on sweet oranges and see if we cannot neutralize your acidity. By all means come.

Formaldehyde.

Formaldehyde is at present the most popular antiseptic and disinfectant. It is found in the market as a forty per cent. solution. Eight to ten per cent destroys the spores of microorganisms in ten minutes. A one per cent. solution destroys cultures within an hour, and disinfects and renders feces odorless. A three per cent. solution will remove all infection from the hands; and one part in ten thousand prevents the growth of pathogenic microorganisms.—*Am. Med. and Surg. Bulletin.*

Lintine, cut into small squares, is an excellent substitute for napkins.

Prizes from Alfred Noble's Will.

The will of the late Alfred Noble, the Swedish chemist, an expert in high explosives, who died at San Remo, Italy, on December 9, 1896, has been proved. The personalty is valued at \$2,170,465.

About half the estate goes to relatives and the remainder is invested, the interest to be divided annually into five prizes of about \$10,000 each. Prizes one, two, and three are to be awarded to the persons making the most important discoveries in physics, chemistry, physiology, or medicine.

Prize four is to be given to the person making the best literary contribution upon the subject of physiology or medicine, and prize five is to be awarded to any person who has achieved the most or done the best things looking to the promotion of the cause of peace throughout the world.

These prizes, which are all open to any persons anywhere in the world, will be awarded by the various Swedish academies, except the prize for the propagation of peace, which is left in the hands of a committee to be elected by the Norwegian Parliament.

Lubricant for Plaster Moulds.

The mixtures, greases and oils usually employed for this purpose have the disadvantage of being sticky or of easily attracting dust. According to Puscher, this drawback is avoided if stearic acid is used instead. Melt one part stearic acid in a glass by immersing the same in boiling water and add four to five parts alcohol (95 per cent). Agitate the clear solution until cold, whereby a thin paste of very finely distributed stearic acid is formed, with which the moulds are coated by means of a paint brush. The spirit evaporates at once and leaves a very thin layer of stearic acid, which admits of readily freeing the cast from the mould.

Life Possible without Stomach.

Some time ago *The Medical Rundschau* reported an operation which had stirred the interest of the medical world. A gentleman at Stettin, Germany, suffering with cancer of the stomach, had been given up as a hopeless case. Dr. Schuchart, of the city hospital, took out the entire stomach as a last resort, and dilated the duodenum to do services as an artificial stomach.

The operation was very successful, the patient lived several years and died only recently of another cause.

On December 24th the *Atlanta Constitution* published another account of a successful removal of a stomach. The operation was performed in Switzerland in August, 1897, and was called the most daring and brilliant feat ever attempted in recent surgical history.

We see the *Medical Record*, from which the account was taken, is a little behind time.

F. A. B.

A Substitute for Cocain.

Dr. Cigrand, in *Dental Digest*, offers the following translation from *Zahnartzliches Wochenblatt*:

As a substitute for cocain, Prof. Einhorn and Dr. Heinz, of Munich, have discovered a new chemical combination, having the desired effects of cocain minus the toxic results so frequently met with. They have named their agency "Orthoform," and great properties have been claimed for the new local anesthetic. It is a non-poisonous white powder, and has the power to completely anesthetize all nerve filaments with which it comes in contact. It has been used successfully in lancing boils and also in minor surgical cases. The powder is placed under the skin or membrane, and after the lapse of a few moments complete anesthesia takes place. The doctors intend to give further attention to this drug and expect soon to place it on the market.

A Deserved Tribute.

Dr. Maercklein, in *Dental Digest*, pays a high but just tribute to the pioneers when he says:

"There is a good reason why the work done by the older practitioners stood the test of time better than that performed by the dentists of the present day. The former class were skilled. They had trained their hands and eyes to a degree of perfection seldom reached by the present generation of dentists. And why? Because they had to. With the newer appliances and improvements, such as rubber dam, dental engines, mallets and cohesive gold, have come into the profession a line of inferior skill and deficient development in manipulative ability. The cause of one-half the failures to-day is not the material, but the manner in which it is used."

Treating Cavities Antiseptically before Filling.

I have been in the habit of wiping out all cavities before insertion of fillings with oil cassia, and drying out thoroughly with hot air.

A few days ago I removed two old amalgam fillings to be replaced with gold. The odor of cassia was quite perceptible.

I believe if oil cassia were used as stated, there would be less recurrence of decay so often seen.

E. H. LEIB.

Bushville, Ill.

For Drilling Glass.

An optician recommends the following method: Dip a drill-borer heated to white heat first into quicksilver, whereby it is excellently hardened, and sharpen by grinding on a whetstone. If the drill thus prepared is moistened with a saturated solution of camphor and oil of turpentine and the bore-hole is kept rather moist, glass may be drilled like wood.

Hang This up in Your Head.

Here is a sermon for every-day reading for those who desire to succeed through their own merit, and not by the very questionable methods so well outlined by Dr. F. D. Davis, in *Ohio Dental Journal*:

"There are various ways of doing injustice and injury to our neighbors even without charging them with incompetency or denouncing them as "quacks." A feigned look of astonishment when scrutinizing their work, a significant shrug of the shoulders, or a disapproving shake of the head, will have the effect of undoing confidence in the operations of their former dentist, and sometimes prove more damaging than open denunciations. To ask if the doctor was not in a hurry when he filled their teeth—if the doctor himself performed the operation—if the work was not done by a student; or, if the doctor's eyesight is not failing him, etc., are insinuations that excite suspicion, and convey the idea that the operations have been slighted. Nor does it make things smoother to add in a semi-apologetic manner, that the doctor was considered a pretty fair sort of a dentist once, but unfortunately he is getting old. All this is needless and uncalled for, as it reflects injury on those to whom such references are made, and fills with distrust the minds of those who have received their attentions. To sum up, no good whatever can result from such ungenerous criticism.

"The cause that tends to failures following dental operations are many, and when considered, it is a wonder that failures are not more frequent. Very many individuals defer their visits to the dentist until driven by dire necessity to seek relief from pain, and it is then found that their teeth are in a sad plight. Some teeth present large proximal cavities, or crowns so decalcified and broken down that reliable walls for retaining fillings can hardly be secured. Exposed pulps, congested pulps, dead pulps

and alveolar abscesses manifest their presence, and yet it is expected that such dilapidated and diseased organs can be so restored as to be better than before they became so wretchedly neglected or abused. People who are so willfully careless and negligent are not entitled to a great degree of sympathy if trouble ensues. Some sufferers seem to obtain a slight grain of satisfaction if they can only saddle the responsibility for their mishaps on others, and their dentist is, in some instances, a convenient scapegoat on which to work their saddle.

"When discontented parties come to us with their complaints, it is clearly our duty to vindicate as far as possible the good standing of our confrères, and at the same time remind our visitors that personal interest and vigilant care on their part is absolutely necessary to escape the consequences of neglect.

"Let us do justice to all others as we would wish justice done to us, and may we never forget that professional courtesies are due to every honorable dentist, and we will be rewarded with happy reflections as well as the good will and esteem of our professional brethren."

Backing a Tooth.

Cut out the backing, punch the holes for the pins, says Dr. Siddall in the *Ohio Dental Journal*, lay the tooth on a piece of soft pine board, with a thick piece of rubber (a piece of solid rubber ball will do) placed over all, and with a hammer, the backing may be swaged to the tooth perfectly. If it be a thick tooth, he says, it may be placed on an anvil and the swaging done without injury to the tooth.

TO STUDY THE DENTAL SCHOOLS OF THE UNITED STATES.—Dr. P. Gires has been officially commissioned by the French government (July 31) to visit this country and study the workings of our dental colleges.—*Gaz. Med. de Paris*, Aug. 21.

THE
American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., JANUARY 27, 1898.

NO. 20.

DENTAL LAW OF GEORGIA.

An Act to establish a Board of Dental Examiners, prescribe its powers and duties, and to regulate dentistry and the practice thereof, and to repeal existing laws regulating the same, and for other purposes.

Section 1. Be it enacted by the General Assembly of the State of Georgia, and it is hereby enacted by authority of the same, That it shall be unlawful for any person to engage in the practice of dentistry in the State of Georgia unless said person shall have obtained a license from a board of dental examiners, duly authorized and appointed under the provisions of this Act to issue licenses; *provided*, that this Act shall not affect the right under the laws of Georgia of dentists to practice dentistry who have lawful right to practice dentistry at the time of the passage of this Act.

Sec. 2. Be it further enacted, That a board of examiners is hereby created to be known as the Board of Dental Examiners of Georgia. The members of the board shall be appointed by the Governor of Georgia upon the recommendation of the Georgia State Dental Society as follows, to wit:

The State Dental Society shall nominate, at its first annual meeting after the passage of this Act, ten reputable practicing dentists, who have been in the practice of dentistry in this State for five years or over at the time of their appointment, five of whom shall be members of the State Dental Society of this State, and five non-members. From such names the Governor shall ap-

point five persons who shall compose the Board of Dental Examiners of Georgia, and hold their terms for one, two, three, four and five years, according to their appointment and commission, and every year thereafter said Dental Society, at its annual meeting, shall select four names, two members of such society and two non-members, who shall have the same qualifications as hereinbefore provided for the members previously elected, from which number the Governor shall appoint one person to be a member of said board, who shall hold his office for a term of five years; *provided*, that nothing in this Act shall interfere with the members of the present board serving in office to the end of the period for which they were elected, and said members, to wit: J. H. Coyle, of Thomasville, Ga.; A. G. Bouton, of Savannah, Ga.; B. H. Catchings, of Atlanta, Ga.; H. H. Johnson, of Macon, Ga., and D. D. Atkinson, of Brunswick, Ga., until the expiration of their said term, to wit: at the annual meeting of the Georgia State Dental Society for the year 1898, and until their successors are appointed and qualified, be, and they are, hereby made the members of said board. In case of vacancy in the board, said vacancy shall be filled by appointment of the Governor upon recommendation of the president of the Georgia State Dental Society.

Sec. 3. Be it further enacted, That it shall be the power and duty of said board to organize by the election of one of its members president and another secretary and treasurer; to meet immediately after the

close of the commencement of each dental college in this State in the place where such college may be located, and also to meet annually regularly at the time and place of the regular meeting of the Georgia State Dental Society, and to hold such meetings in any county in the State as often as the business and duties of the board may require, the calls for such meetings to be made by not less than three members of said board, and a written notice of the time and place and object of said called meetings to be mailed by the secretary and treasurer of said board to all members thereof not parties to the call, at least fifteen days before the day of meeting; to examine all applicants for licenses to practice dentistry who are entitled under this Act to be examined, and to issue licenses to practice dentistry according to the provisions of this Act; to collect and apply all fees as directed by this Act; to keep a book showing the names of all persons to whom licenses have been granted by said board to practice dentistry, and such other books as may be necessary to plainly show all the acts and doings of said board; to have and use a seal bearing the name, "Board of Dental Examiners of Georgia."

Sec. 4. Be it further enacted, That each member of the board shall, upon his qualification, file with secretary and treasurer his post-office address and thereafter a notice of any change therein. Any notice sent to the address so on file shall be deemed to comply with the requirements of this Act as to notice to them.

Sec. 5. Be it further enacted, That all books of said board shall be books of public record, and at all times, except on Sunday and public holidays, be kept open to public inspection. A certified copy of any part or all thereof shall be primary evidence in any court of this State. The original books shall be kept in the office of the secretary and treasurer of said board, wherever he may reside, and he shall furnish to any person making application therefor a copy of

any part thereof upon the applicant paying a fee of fifteen cents per hundred words so copied, the said fee to belong to the secretary and treasurer. All certified copies shall be certified by the secretary and treasurer.

Sec. 6. Be it further enacted, That said board shall examine all applicants furnishing satisfactory evidence of having graduated from a school of dentistry whose term and curriculum is equal to that of a majority of schools of dentistry of the United States, or furnishing satisfactory evidence of having been licensed after examination by any other State board, and if such applicant pass a satisfactory examination, a license to practice dentistry shall be granted to the applicant.

Sec. 7. Be it further enacted, That if any dentist shall be guilty of cruelty, incapacity, unskilfulness, gross negligence, indecent conduct toward patients, or any such professional misbehavior, or show unfitness upon the part of the dentist to practice, shall be guilty of a misdemeanor, and, on conviction in any court of this State having jurisdiction of such offenses, shall be fined as prescribed in section 1039 of vol. 3 of the Code of 1895, and his license to practice dentistry shall be revoked by the board.

Sec. 8. Be it further enacted, That any dentist or other person who shall at any hearing before the board, either by himself or by his procurement, make any false statement or misrepresentation with intent to deceive or mislead said board, shall be guilty of a misdemeanor, and, upon conviction before any court having jurisdiction of said offense, be fined as prescribed in section 1039 of vol. 3 of the Code of 1895, and such dentist's license to practice shall be revoked by the board.

Sec. 9. Be it further enacted, That any person who, in violation of the provisions of this Act, shall practice or attempt to practice dentistry in this State, shall be deemed guilty of a misdemeanor, and upon conviction

tion thereof shall be punished as prescribed in section 1039 of vol. 3 of the Code of Georgia of 1895; *provided*, that nothing in this Act shall be construed to prevent any person from extracting teeth without fee or reward.

Sec. 10. Be it further enacted, That in order to provide the means for carrying out and maintaining the provisions of this Act, the said board of examiners may charge in advance each person applying to or appearing before it for each entire examination for license to practice dentistry, a fee of ten dollars (\$10.00), which in no case shall be refunded to the applicant. Out of the funds coming into the possession of the board when so collected the members of the board may receive as compensation the sum of four dollars (\$4.00) each for each day actually engaged in the duties of their office, and all necessary expenses incurred in attending the meetings of the board or in prosecuting cases. Said expenses shall be paid from the fees received by the board under provisions of this Act, and no part of the salary or other expenses of said board shall ever be paid out of the State treasury. All money received in excess of said expenses above provided for shall be held by the secretary of the board as a special fund for meeting the expenses of said board, he giving such bonds as the board shall from time to time direct, and receive such compensation as the board shall prescribe. The said board shall make an annual report of its proceedings to the Georgia State Dental Society, together with all moneys received and disbursed by the said board pursuant to this Act; *provided*, that should an amount exceeding three hundred dollars be at any time accumulated over and above the legitimate expenses of the board, all moneys in excess of this amount shall be paid into the common school funds of the State.

Sec. 11. Be it further enacted, That all persons licensed by said board to practice dentistry shall cause such license to be regis-

tered by the clerk of the superior court in the county or counties in which such persons may desire to engage in the practice of dentistry, and said clerk of the court shall issue a certificate to that effect, and receive a fee of fifty cents for same. Any failure, neglect or refusal on the part of any person holding such license to register the same with the clerk of court as above directed, for a period of six months, shall work a forfeiture of the license, and no license, when once forfeited shall be restored except upon the payment to said board of examiners the sum of ten dollars (\$10.00). The temporary license hereinafter provided for need not be recorded.

Sec. 12. Be it further enacted, That three (3) members of said board shall constitute a quorum for the transaction of business, and should a quorum not be present upon the day appointed for the meeting, those present may adjourn from time to time until a quorum is present.

Sec. 13. Be it further enacted, That in cases where a person is entitled to an examination for a license, one member of said board may examine him and furnish a temporary license to any applicant to practice dentistry until the next regular annual meeting of the board, when he shall report the fact, at which time the temporary license shall expire, but such temporary license shall not be granted by a member of the board after the board has rejected the applicant. For conducting said examination, the member of said board conducting the said examination may, in advance, charge and receive a fee of five dollars, to be applied to his own use for his services in examining the applicant. No other fee shall be charged for granting the temporary license.

Sec. 14. Be it further enacted, That it shall be unlawful for any person to practice dentistry or do any dental operation under the protection of another's license.

Sec. 15. Be it further enacted, That all

persons shall be held to be practicing dentistry within the meaning of this Act who shall charge a fee or salary, or other reward be paid either to him or another person, for operations or parts of operations of any kind in the treatment of diseases, or lesions of human teeth or jaws, or extract teeth, or in correction of the malpositions thereof; *provided*, that nothing in this Act shall apply to regularly licensed physicians extracting teeth and charging a fee therefor, or performing surgical operations.

Sec. 16. Be it further enacted, That all dentists in the actual practice of their profession in this State be, and they are, hereby exempt from jury duty; *provided*, that this exemption shall not operate to disqualify those dentists who may wish to serve.

Sec. 17. Be it further enacted, That all of the laws heretofore enacted and existing in the State of Georgia referring to dentistry and the practice thereof, and to the several particular matters contemplated in this Act, be, and the same are, hereby repealed, and all laws in conflict with this Act be repealed.

Approved December 15, 1897.

To Preserve Gutta-Percha.

Gutta-percha will remain almost unchanged if covered with water, especially sea-water, or if protected from the action of light. The readiness with which it suffers change in the air or under the action of light-rays materially limits its employment.

Warm Solution of Cocain.

The local anesthetic effect obtained with cocain is more rapid, more intense and more lasting if the solution is warm. The dangers of intoxication are thus much diminished, as the quantity of cocain can be very much reduced if it is warmed. A solution of 0.5 or 0.4 per cent. heated will produce a powerful effect.—*Da Costa*.

HYDRONAPHTHOL, THE ANTISEPTIC.

In recent years the list of antiseptics and germicides has grown to a marvelous extent, and the race for ascendancy between them has been equally well noted. Hence, we are naturally slow to recognize the extravagant claims made for the most of them.

Dr. Sidney Stowell, Pittsfield, Mass., in *Cosmos*, seems to have found an antiseptic and germicide specially adapted to general dental use. In a lengthy article on the subject, full of data and painstaking investigation, he says: "That I have discovered the elixir of life I do not claim, for it is appointed unto all men, and some teeth, once to die. But there is a balm in Gilead, and it is that which I have brought you; its name is "hydronaphthol." Besides the doctor's own experience, he quotes at length the testimony of leading physicians and dentists, indorsing, in the highest degree, the antiseptic properties of hydronaphthol. The article deserves to appear in full, but our space will only admit of a brief synopsis. He says:

That he might prove it well, had used the drug constantly for more than five years to the exclusion of nearly every other antiseptic agent, and with such phenomenal success that he deemed it his duty to the profession, and to humanity at large, that he present its merits here; had used hydronaphthol principally in two forms, the twenty-five per cent. alcoholic solution and the powdered form. In all cases where an antiseptic solution is required in dentistry he used the alcoholic solution, often reducing it with glycerol or water as the case might require. In the treatment of a putrescent pulp-canal, the penetrating property of the alcohol and its affinity for moisture carries it laden with its hydronaphthol in solution to the remotest nook and corner of the pulp-chamber and canals however small, even to the apex and through into the soft tissues,

as well as into the tubuli of the tooth. The alcohol having thus penetrated every part of it at once evaporates, leaving the hydronaphthol to do its perfect work of disinfection.

We all know with what fear and dread we have opened into a pulpless tooth of long standing, having no open fistula, and what dire results have followed, supposed to be the result of a multitude of hungry microbes rushing into a fertile field. An inflammation is at once set up which is almost unbearable, the quickening pulse and rapid breathing soon indicate a high fever, and often for two or three days or a week the patient, whether a robust man or a delicate woman, will be confined to the bed in a dark room, there to writhe in agony until suppuration of the inflamed part takes place and the pus burrows its painful path through the plate of bone and soft tissues, and finally breaks and discharges. In the meantime the physician and dentist have been in almost constant attendance, using all the known remedies for such cases, and neither doctors nor medicines have really done any good, other than to encourage and speak good cheer to the suffering martyr, that for all this agony he will still retain the tooth, that it may yet become useful. We have all been through this experience, either personally or with our patients, and all have realized how powerless we were with all our drugs to relieve our patient's suffering. He made the statement that when an old pulpless tooth is opened into, if the alcoholic solution of hydronaphthol is at once placed in the pulp-canal, the conditions referred to are *absolutely impossible*.

In order to clean hypodermatic syringe needles, occluded by deposition of material from the injection fluid, boil the needles for ten minutes in a solution of sodium carbonate. This not only cleanses the needle internally but also restores the brightness of the external surface.—*Brown*.

Permanganate of Potash as an Antidote for Opiates.

The permanganate neutralizes a great number of organic poisons, but does not act as the *Journal des Praticiens* states, on cocain, aconite, atropine and others; even phosphorus, which is oxidized so easily, resists its action. Opium and its alkaloids, on the contrary, respond immediately. A physician, who experimented on himself, obtained the best result. He swallowed 30 grams of the sulphate of morphine, which was followed by 50 grs. of the permanganate of potash, without experiencing the least effect from the opiate. It is unnecessary to take the antidote immediately, because the opiate paralyzes the stomach and intestinal tube to a certain extent, retarding the action of the potash. In cases of poisoning the permanganate of potash is first given in diluted solutions, say 50 grms. to 250 grms. of water. Wherever the morphine was injected hypodermically, commence with a solution of 6 grms. in 100 grms. of water. The antidote is given hypodermically, 1 in 100, if the patient is under the influence of the narcotic so profoundly that he is unable to swallow. It acts then as well, but in a manner which cannot be explained as yet.

F. A. B.

"New York," in *Dental Digest*, suggests a good idea:

"Put a mandrel in the hand-piece, set the engine in motion and let the mandrel wind on a piece of cotton from the fingers, which forms a cotton cone. Then with the aid of polishing powders we can cleanse the crowns and necks of teeth and get into the pockets and loosened gum tissue, smoothing the rough surfaces of the exposed roots, and doing it in a merciful way. The size of the cone will suggest itself to the operator."

How glad we are to hear of others' failures. Why? Because we then know that others make failures.

Aching Bicuspid.

Some time ago a young man came to my office complaining of an aching left lower second bicuspid; said it had been troubling him for weeks. Upon examination found pulp exposed and in congested condition, and concluded to devitalize. In a few weeks after filling the root he again returned, complaining of a dull, heavy pain in the tooth. Could find no indications of any trouble; put him on local treatment, with no good results, so concluded to extract; found on the buccal side of root a tumor the size of a pea. He then told me his father had tried to "pull" the tooth, at two different times, with a pair of "pinchers"—the resulting injury to peridental membrane no doubt causing tumor and finally loss of tooth. The root was found perfectly filled.

Rushville, Ill.

E. H. LEIB.

Nerve Paste.

The following, for a nerve paste, Dr. Chupein says is sure and painless:

Acetate of morphin.

Hydrochlorate cocain.

Powdered arsenious acid.....aa 3 ss.

Mix and add carbolic acid to make paste. The paste must be made on a slab or tile by thoroughly mixing with a spatula.

Gutta-Percha Paper.

According to a patented process, says the *Rundschan*, a fabric saturated with glue or gelatin solution and subsequently treated with gaseous or dissolved formaldehyde, furnishes a good substitute for gutta-percha paper. The formaldehyde renders the glue or gelatin insoluble in hot water and prevents cracking.

Mrs. Barclay, wife of Dr. J. T. Barclay, of Cleveland, Ohio, died January 8th, after long illness and suffering. Our deepest sympathy goes out to the bereaved husband.

A Humane Rat Trap.

As a more humane and efficient method of ridding a house of these pests the inventor provides a trap which, as the rat goes into its wide-open entrance, will spring upon the body of the rat an elastic band to which are attached bells, and bunches or tufts of cotton or other material, painted or coated with phosphorescent paint. The rat, it is claimed, will then "immediately run away, with the bells tinkling and the plumes waving, so frightened that he will make a tour of all his holes and runways, meeting all his brethren and frightening them by the sound of bells, the phosphorescent tufts, and his fantastic appearance." It would not be strange if "this being kept up for a short time would drive all the rats away."—*Scientific American*.

The Second Oldest Dental Journal.

The Dental Register is fifty-two years old. This seems quite ancient to anything connected with dentistry. May the *Register* and its worthy editor, Dr. Jonathan Taft, live a thousand years.

The article on Arthur Henry Hallam, by Mr. Gladstone, in the New Year's number of *The Youths' Companion*, is one of the most fascinating literary papers ever written by the great English statesman. It carries one back to a past full of charms. The remainder of this number abounds in interest. There is the beginning of a new serial story by C. A. Stephens, a good story of a reporter's interview with the late Emperor Dom Pedro of Brazil, several other short stories of exceptional merit, and the usual rare selection of miscellany.

It has been said that when one dies of delirium tremens, if a hole is drilled through the skull, alcoholic vapors will escape and can be ignited. Is this the first blaze of hell fire?

How to Duplicate Plaster Models.

Dr. Eug. Müller's method of reproducing plaster models in any number wished may be a good one if, as he maintains, his preparation does not produce shrinkage. The following is his method as described in the *Schweizerische Viertel Jahresschrift*: About 150 leaves of common gelatin are soaked in cold water for one to two hours. This mass is then boiled and four or five ounces of oil are gradually added, constantly stirring the mass. The model is now placed in an enameled vessel and the mixture poured over it. After three hours the mould becomes hard, the model is removed and any number can be poured.

F. A. B.

If You Knew

The large number of subscribers on our list, representing as they do the very cream of the profession, you would seek our columns for the dissemination of your views.

It is due yourself, to say nothing of your confrères, that you write, not a book, but a short article on what you *know*, *do* and *think*. Let us have it quick?

J. A. C.

Cataphoric Treatment a Cause of Poisoning.

Dr. Moore, of Frankfort-on-the-Main, reports in the *Zahnärztliche Wochenblatt* a case of poisoning after cataphoric treatment. It was found that the large apical foramen of the tooth had enabled the cocain to enter the organism very rapidly.

F. A. B.

Mr. Charles A. Conant, who served as secretary for the Monetary Commission which recently closed its labors in Washington, contributes to the *American Monthly Review of Reviews* for January, an able exposition of the various plans for currency reform now before the country.

Occupation for the Blind.

Dr. A. Y. Bennett, of Erie county, recently read a paper before the New York State Medical Association upon "Massage as an Occupation for the Blind," in which he called attention to the large and increasing number of blind persons, most of whom are dependent upon others for their support, and said that the estimated number in this country is 56,000, of which 4,398 are in this State. In order that many of these may become self-supporting, he advocates that they be taught massage in the State institutions, being trained in the anatomy and physiology of the body before they learn practical work. He considers that the peculiar delicacy of touch which the blind possess makes them especially fit for this kind of work.

Editor American Dental Weekly:

In last week's issue of WEEKLY your editorial "Is the dental profession crowded?" you speak of a dentist's standing being rated by the public by the "sticking of his fillings." Around here it depends largely on his ability to pull teeth. Woe be unto us if we ever fracture a root.

I get THE WEEKLY on Mondays; am as delighted to get it as the little boys are their *Youths' Companion*. Have been doing some missionary work for it. You probably will see results later. Yours truly,

Rushville, Ill.

E. H. LEIB.

A small bit of paraffin placed upon a cement filling and gently burnished with a warm instrument, will protect it from moisture, thereby insuring a harder surface, and, it is claimed by some, prevents attacks of micro-organisms around the margins of the filling.

The optometry bill granting opticians the right to refract eyes and fit glasses was defeated in the New York legislature, by a vote of seventy-three to fifty-one, on the ground that this work belongs to oculists and not to mechanics.

Carbolic Acid.

After a long article in the *Dental Practitioner and Advertiser* on carbolic acid, the writer sums it all up with this sentence: "It may be said, on the whole, that while carbolic acid is a useful application in dentistry, there is scarcely an occasion when something better, or at least more elegant, may not be substituted for it."

Then why did he consume so much time and space in dealing with something that he is pleased to place second to many things? There is one thing, if no more, that carbolic acid seems to do better than anything else, and that is the destruction of an abscess sac. Other caustics may do very well, but carbolic acid is excellent. It is not time yet to discard this remedy.

Be Cleanly.

Every few days one can hear remarks from patients about some dentist using soiled towels, napkins or rubber dam.

I cannot understand why any one wants to do it. If they cannot make dentistry profitable enough so they can use clean towels, napkins and rubber dam, for the love of their brothers, if not for the profession, get out of it.

Success in dentistry depends largely upon one's ability, combined with cleanliness—*e. e.*, spotless napkins on both tray and head-rest, with towels and operating coats from same drawer—one's success is assured.

E. H. L.

You Will Do Us a Favor,

When writing to our advertisers, to mention the fact that you noticed their advertisement in the WEEKLY.

Your attention is called to the advertisement of Messrs. Kellam & Moore. There are no better and more scientific opticians in the United States.

Necessity of Cover during Sleep.

The object is simply this: Nature takes the time when one is lying down to give the heart rest, and that organ, consequently, makes ten strokes less a minute than when one is in an upright posture. Multiply that by sixty minutes and it is six hundred strokes. Therefore, in eight hours spent in lying down, the heart is saved nearly five thousand strokes, and as the heart pumps six ounces of blood with each stroke, it lifts thirty thousand ounces less of blood in a night of eight hours spent in bed than when one is in an upright position. As the blood flows so much more slowly through the veins when one is lying down, one must supply, then, with extra coverings the warmth usually furnished by circulation.—*Popular Science News.*

Tooth Protection.

Sometimes after a tooth is filled, though the pulp has been protected, thermal changes will affect the pulp, and the patient will complain that the operation was not properly performed. W. E. Chapalat, in *Progrès Dentaire*, says to avoid such inconvenience he dries the tooth and puts on it a drop of collodion, the ether of which quickly evaporates and leaves a coating, which protects the tooth for quite a while. The treatment can be done by the patient as often as necessary.

Green Gold.

Green gold is composed of pure silver one part and pure gold two parts.

Dr. Mellotte says that he backs all teeth with it, and can solder it with 20-carat solder.

If you wish to throw away your dull burs, try the acid bath recommended by W. Dunn, D.D.S., Florence, Italy.

W. H. W.

THE
American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription \$2.00 per year; \$1.00 for six months—including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, January 27, 1898.

"Is there any Further need of such Organization?"

There has been so much, very much, written on the subject of dental laws and examining board that we hesitate to add another word, yet some of the articles have been so puerile, and the writers thereof seemed to see through a glass so darkly, that we are constrained to quote from an editorial in the *Dental Cosmos* of the January issue, which hits the question of abolishing examining boards squarely on the head, and which shows up the usefulness of such institutions. We must say, however, that we are agreeably surprised to find the editor of the *Dental Cosmos* so emphatic and positive in the position he has taken—the right position, of course. What he says must carry additional weight, as he is the dean of one of the Philadelphia schools. His text is taken from an "Open Letter" in the *International Dental Journal*, the edi-

tor of which seems to be in accord with the sentiment of the writer. The said letter is quoted as follows (Italics ours): "*When dental examining boards were created, they were deemed essential as a stimulus to dental college faculties to be more exacting and stringent with candidates for graduation, that they might send graduates forth to practice better qualified than by the prevailing custom.*" The editor of the *Dental Cosmos* says: "And he admits that this result has been in part accomplished. He thinks, now that the impetus derived from the source named has been given, the tendency toward higher planes of action is capable of continued activity without further stimulus of the same sort, and asks, '*Is there any further need of such organizations?*'" and answers the question negatively. In other words, the stimulating and elevating effect of the examining boards has ceased to be necessary; the colleges collectively, under their purifying and elevating influence, have reached a point where they graduate only those competent to enter upon the intelligent and honorable practice of their profession. This being the case, the colleges may be henceforth confidently left to their own devices.

"Does any man believe this to be a true picture of the situation, or a safe basis for dental education to rest upon? If so, let him practically investigate the problem, for he needs enlightenment. The proposition to do away with examining boards is a proposition to do away with legal restraint; to do away with legal restraint is to establish anarchy. Are we ready just yet, are we sufficiently advanced toward perfection in our social relationships, to remove the barriers which are a restraining force upon human greed and the desire to get something for nothing? Certainly, whenever in other departments of human endeavor these elements have been and are working harm, the limiting forces of legislative enactment have more or less effectively been brought to bear upon them; and it is admitted that up to a certain point these same forces have been of benefit to dentistry. We are asked now to dispense with them; the educational institutions of dentistry having, through the influence of dental laws, become converted from the error of their ways, may be trusted to continue in the paths of rectitude henceforth. We are frankly of the opinion and belief that such a view is not in accord-

ance with the facts as they exist, for the simple reason that the element of commercial competition among colleges is as strong to-day as it ever has been—even stronger, perhaps; and so long as the financial resources of teachers are dependent upon the sizes of their classes, so long will the temptation to graduate incompetent men exist.

"It is not only the constitutional right, but the duty of the State, to prescribe the standard of qualification of those who are care-takers of the public health; and to that class the dentist belongs. Every civilized nation on the globe recognizes that fact, and has enacted dental laws in accordance with that principle. In this country the autonomy of the several States causes complexity in the practical carrying out of the principle, because of the present differences in State standards. The result is a regrettable lack of uniformity; but the underlying principle is the same in each case, and is universally recognized the world over."

We must be pardoned for quoting the following from the above for the sake of emphasis: "The element of commercial competition among colleges is as strong to-day as it ever has been, even stronger."

This "commercial competition" in dental colleges was just what brought about the enactment of State dental laws, and it will continue to be the force that will cause such laws to exist, and not only to exist, but to become more rigid. Knock out forever the commercial spirit from dental colleges and you knock out the very foundation for dental laws and examining boards. The commercial spirit can never be eliminated so long as a few men can get together and procure a charter for a college. The creation of every new college creates a new demand for pupils, and pupils they must have and will have. The only hope for the profession is rigid State laws and boards to enforce them. All worthy colleges encourage and foster State dental legislation.

It is not perhaps unnatural that the effort to execute the new surgical operation by the removal of the stomach from a Milwaukee man produced a bier.—*Atlanta Journal*.

Riggs' Disease.

About sixty years ago a Dr. Bright, in England, called the attention of the medical profession to a form of nephritis. The disease was and is called Bright's Disease. About how many years ago we can't say definitely, Dr. John M. Riggs, of Hartford, Conn., called the attention of the dental profession to a disease of the gums or cementum or pericementum or alveolus—one or all combined, no matter—he called attention to a certain disease. It should have been called Riggs' Disease, which name involves no disputable position. We have persisted in so calling it, and expect to continue, for it means as much, and really more, than pyorrhea alveolaris, which has no specific meaning at all, but may be used for any discharge of pus from the gums, which, in a great many instances, is not Riggs' Disease at all.

In honor to the one who called attention to the disease, and who really offered a treatment for it, it should bear his name. The medical profession so honored Dr. Bright, as it has honored others by naming certain diseases for them. There is no reason why we should not so honor Dr. Riggs. We have thought that when this matter has been mentioned before some showed a spirit of jealousy in opposing it. The pathology of the disease has not been sufficiently determined to give it a true pathological name. And should its cause or action be definitely ascertained, there would still be no good reason for not calling it Riggs' Disease. It is never too late to honor the name of an honorable man.

Cocain Excitation.

A dentist injected cocain for tooth extraction. The patient, after leaving the office, became so excited that he had to be carried to police station, where, after proper treatment, he was brought around to his right mind.

The Operating Table.

Remove the rim from around the edge of the table and replace it with one twice as high. Remove the cloth or leather cover and cut a pane of glass to fit in the rim exactly, lay on the table a sheet of white paper, cut to fit, and place the glass over it. The glass is easily kept clean, the smallest instruments on it are easily discernable, and, besides, it can be used for the placing on of many things that would soil a cloth cover.

To the side of the table can be fastened a circular clamp for holding the glass of water for the syringe. Also in the side can be put a screw-eye for holding the chip-blower.

Some of the conveniences on the top of the table are a small shallow porcelain dish for holding burs, a small rose or violet bowl for holding plugger points, another larger rose bowl for holding cotton, a small porcelain dish for holding paper pellets, a small glass-stoppered bottle containing alcohol. The alcohol is used very beneficially in wiping out cavities and for cleaning off teeth even before excavating is begun. Into the rim stick a small nail, over which slip a small spool of waxed silk, for ligatures. The silk we have used for years is embroidery silk, wound on small spools. None of these things are in the way; having them conveniently at hand saves much time.

An adjunct to the operating-table is a small stand, about four feet high, on which the assistant places the gold and annealing lamp, and which can be placed close to the patient's head, saving distance in carrying the gold to the tooth being filled.

Such conveniences expedite work and are really labor savers. If any reader has any other convenience about his operating-table we would be pleased for him to give it to us.

Brother Herbst is now diving under saliva to fill teeth. He is after selling something.

The Georgia Dental Law.

In this issue is printed, in full, the new dental law of Georgia. It may not be beyond criticism, and criticism would hardly be wise, when it is considered how difficult it is to get dental legislation as perfect as the leaders in the profession would have it. There is one clause in the law to which we wish to call special attention. It is section 7, which we believe is something new in dental legislation. It is to be hoped that the Board will not have occasion to enforce this section, but if so, we feel sure that it will be enforced to the "very letter of the law."

The per diem allowed the Examiners is not sufficient to cause the office to be sought. The pay is not commensurate with the labor performed.

Cracking Coal for Cutting Glass.

Ninety parts powdered charcoal, 2 parts saltpeter, 1 part gum benzoin and 2 parts tragacanth powder. Pulverize all finely, knead with water into dough, roll little rods from it, which are dried. Light these, pass slowly over the glass, and cause a drop of water to fall on it, whereupon the glass cracks off. To be used for cutting off glasses and bottles.

Cease from Your Labors.

All work and no play makes Jack a dull boy. Isn't it true? Cease from your labors long enough to spend a week or ten days in the lovely and quaint old town of St. Augustine, Fla., during the meeting of the Southern. Any of the many lines of the Southern Railway will land you there.

I have enjoyed the AMERICAN DENTAL WEEKLY very much. It is a success, sure.
Le Mars, Iowa. E. D. BROWER.

War Clouds Dispersing.

The fight between the colleges, examiners and some editors seems to be quieting down to some extent. We predicted when the clash between the colleges and examiners seemed inevitable that it would all go off in smoke, and we are glad to see this state of affairs coming about sooner than we had expected.

We are sorry, however, to see that some of our confrères, having let up on the examiners, have now turned loose on the Southern Dental Association, branch of the National. When a man gets mad he is going to vent himself on something, so we will say unload, friends, and then come and shake. We have done nothing to deserve all this condemnation, and we know that after awhile you will feel ashamed and want to make up.

H. H. J.

Messages from Massachusetts and Switzerland.

A prominent dentist in Massachusetts, and a valued friend of THE WEEKLY, says: "A practical paper, bristling with succinct articles of every-day value, serves the busy man best. Let us *all* help to make THE WEEKLY a good servant."

That's the spirit of progress. Let *all* help. Don't be content to receive all and give nothing. Send the items; the editor will adjust them, if need be. Make THE WEEKLY a weekly medium of exchange.

From Switzerland a staunch friend of THE WEEKLY writes: "Believing THE WEEKLY to be just the paper dentists have been looking for, I will do all that I can to help it along."

Now, you home fellows wake up! Scratch the rust from your pens and write. If you say that you can't write and that you have no ideas, why! why! why!

Some of the medical schools of New York will establish chairs of hypnotism.

Cocain as a Safeguard in Anesthesia by Chloroform.

A London chloroformist claims that the trigeminus is responsible for the dangers to the heart and respiration by the reflex irritability of its terminations at the mucous membrane of the nose. His method is to anesthetize the nasal mucous membrane, which is done by requiring the patient to blow his nose and then, leaning forward or sitting, but never lying, to sniff a centigram of a powder consisting of 10 per cent. of cocain hydrochlorate and some inert substance. Repeat in about three minutes, and begin use of chloroform. In fifty cases in which cocain was employed in this manner the conclusions were: The commencement of anesthesia is less disagreeable to the patient, who never makes defensive movements; oftentimes the excitement stage is wanting, and is always slight, except in cases of alcoholics; during anesthesia the patient rarely vomits, and if vomiting does occur it is accompanied with slight retching; upon awakening the patient experiences no disagreeable sensation and is not troubled by the after-smell of chloroform or ether.—*Daily Lancet*.

Hemorrhage after Pulp Extraction.

Following the surgical extirpation of the dental pulp—an operation that can often be best performed with an Ivory broach—the hemorrhage, so often great and troublesome, may be almost instantly arrested by the crystals of gallic acid carried on a twist of cotton about a smooth broach and forced well into the canal.

A. M. R.

Springfield, Mass.

EXPLAINED.—He—"They say iron enters largely into the composition of the human system." She—"I suppose that is the reason a man loses his temper when he gets hot."—*Truth*.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., FEBRUARY 3, 1898.

NO. 21.

SOME PRACTICAL THOUGHTS ON THE EYE.

DUNBAR ROY, A.M., M.D.,
Atlanta, Ga.

In my last short article in the *American Dental Weekly* my remarks were more of a general character than specialized upon any particular subject. To-day I wish to confine myself more to one subject, and with some practical thoughts about the use and non-use of the eyes. The function of the eye is to see, and this carries with it the idea of orientation. The first occurs just so soon as the infant opens its eyes to this mundane existence. The second when the brain begins to correlate and form concepts of the things which are seen. Let us look for a moment at some of the main points in the anatomy and physiology of the eye. The visual organ might be roughly compared to a camera obscura, the sensitive plate being the thin, expanded membrane called the retina, which lines the posterior two-thirds of the globe, and which, in its anatomical make-up, is nothing more than an expansion of the optic nerve, or nerve of sight. Nature has prepared a wonderful mechanism by which objects at almost any distance from the eye can be seen, and when the adjustment of this mechanism is broken it leads to various pathological disturbances, to which I will later call attention.

This thin, expanded retinal membrane is the sensitive plate upon which all rays of light from an object must be *exactly focused* in order to have distinct vision and at the

same time not strain the eye. This membrane receives the impression, transmits it to the brain by means of our nerve of sight, and then the brain forms its own judgment. In order for any one to understand how an eye may be injured from injudicious use of the same, or what is the significance of certain symptoms produced sometimes by the over-use of our eyes, it is necessary for us to understand the physio-anatomical mechanism of this organ. In order for us to have distinct vision the rays of light from an object must be focused on the retina. Now the two conditions necessary to bring this about are two-fold: 1. Perfect muscular adjustment. 2. Transparency of the refractive media. Behind the pupils of our eyes is situated a double convex lens whose duty it is to collect the rays of light and focus them upon the retina. This lens differs from ordinary convex glass lenses in the one main particular that it is elastic and can be made more convex and less convex. This is nature's provision. The more convex a lens is the nearer to it is its focus and *vice versa*. Hence it is by this latter function which it possesses that we are enabled to see and focus objects at any distance from the eye. Now, how is this change in the convexity of the lens brought about? The lens is inclosed in a transparent capsule, and whatever will loosen and make tense this capsule, will also change the convexity of the lens, since the lens itself is elastic. Now this tension and relaxation of the lens capsule is brought about by a little muscle called the *ciliary muscle*,

which has just this function. The greatest activity of this muscle is produced when there is constant close application of the eyes, for the nearer the objects the more strain is there upon these visual members. Hence it is that undue close application continued for any length of time, will bring about a fatigue of this muscle, especially if it be at all weak.

I shall now speak of the different kinds of "weak eyes;" and in the conclusion of these little talks I shall give some practical suggestions as to how and how not the eyes should be used. Broadly speaking the manifestations of weakness in eyes may be included under the one general technical term—asthenopia, or lack of strength.

Now this lack of strength is produced by one of three conditions:

1. Weakness of the accommodation or weakness of the ciliary muscle.
2. Weakness of the muscles which turn the eyes in their various directions.
3. Weakness or want of tone in the recipient or nerve apparatus, especially the retina.

Let us look at the first division and get some practical idea of its meaning.

The ciliary muscle may be naturally inherently weak, together with other muscles of our body, or the work put upon it may be so severe or so prolonged that it is unable to keep up the strain. The first condition we find in those of a physically weak constitution, where muscular strength is lacking in every portion of the body. Especially is this seen in individuals recovering from a severe illness, or in women immediately after childbirth, where the muscular tone of the body has not regained its accustomed strength. People of a weak nervous temperament also show this weakness. The main symptoms in such cases are these: objects and print are seen distinctly at the first glance but in a few moments fade away; such people are unable to use their eyes for any length of time, because

letters and objects will either run together or become blurred. The eyes quickly ache and become tired. Such a condition is not so apt to produce headaches as others which I shall mention. Now, how should such people care for their eyes? In the first place, the eyes should not be used for close work until the general physical strength increases. When they do begin, it should not be to the point of fatigue, but only for a few moments at the time. All intense glares of light should be avoided, for the retina is also sensitive. The whole system should be built up by judicious tonics and outdoor physical exercise. If the eyes have to be used at any time, then "rest glasses" might be adapted to the eyes, but only for temporary use. Glasses should not be used unnecessarily.

THE IMPORTANCE OF HYDROGEN DIOXID AS A HEMOSTATIC.

Dr. Richard Schulz writes in an extensive article in the *Odontologische Blätter* of the qualities of some of our local hemostatics in general use, and praises the superiority of the hydrogen dioxid as the cleanest and most effective of them all.

Of all local remedies used in surgery to check hemorrhages, he says ligation is the most energetic one. But the dentist is mostly confronted with cases which he has to treat in a different way, in order to produce the quickest results and avert inconvenient secondary bleedings.

Among the simplest remedies, which have been in use even by the Greeks and Romans, are cold and warm applications. Cold causes the contraction, not alone of the bleeding vessels, but also of the neighboring soft parts, while warm applications, in shape of white heated irons, cause the ends of the vessels to be burned, checking the flow of blood in this manner. The white heat acting at the same time as an

antiseptic, would be an ideal hemostatic, but in many cases the scurf falls off too soon.

Another group of local remedies are medicaments, whose uses depend more or less on their astringent and coagulating properties. Oil of turpentine causes a quick contraction of the walls of the vessels and surrounding tissues. The iron preparations stop hemorrhage very readily, but are followed by disagreeable sloughing and soreness of the tissues, leaving ugly wounds. The mildest of them all is the ferripyrin, a compound of the chlorid of iron and antipyrin, which, while not corroding as much, may act like antipyrin, if long in contact with the tissue.

Hydrogen dioxid does not possess any of the disadvantages of the above named hemostatics. It is perfectly harmless, cleansing, and an excellent styptic. Dr. Schulz proved this in many instances, and even had quicker results with the hydrogen dioxid than with the strongest iron preparations.

Of great interest is the action of hydrogen dioxid on blood. Equal quantities of pig's blood were put in glass tubes and acted on by 2, 5, and 10 per cent. solutions. Instant effervescence took place, which continued till every particle was dissolved and bubbles of the consistency of soap-foam were formed. It was found now, that 25 drops of a 2 per cent., 15 drops of a 5 per cent., and 7 drops of a 10 per cent. solution were required to dissolve equal quantities of blood. After some time the foam returned to its liquid state, but the blood had taken another color; it had become dark red, almost black, and was now quite transparent, a proof that the hemoglobin had been dissolved entirely.

To further find out in which way the oxygen of the hydrogen dioxid caused the blood to clot, Dr. Schulz put a quantity of the foam on a glass dish and exposed it to a temperature of 35 degrees C. After some hours the bubbles were dried up and found

to consist of a tender net-work of fibrin. From this formation of fibrin and the dissolution of the hemoglobin the action of the hydrogen dioxid on the blood can be explained scientifically. The red blood corpuscles are destroyed readily, causing an excellent clotting of the blood. F. A. B.

NEW YORK CORRESPONDENCE.

Dear Mr. Editor:

January is the month for Dental annual meetings in and around Greater New York, and this year has been no exception in either number or quality.

The First and Second District Dental Societies met in Brooklyn—in the Borough of Brooklyn, I should have said in connection with the Central Dental Association of Northern New Jersey. The Second District was the host. It has long been the custom for the First and Second District to hold their annual sessions together, and this year it was the Second District's turn. Our brother practitioners of New Jersey, commonly spoken of as the "Hornets," and their long appellation shortened to the "C. D. A.," have always been great friends of both District societies, and so came in in a body for all the good things of the occasion. This meeting was on the evening of January 10th and the regular meeting of the First District, occurring the next evening, was only a business meeting.

The essayist of the evening, Dr. W. A. Price, of Cleveland, Ohio, read a long, rather dry, treatise on "The Foundation Principles of Dental Cataphoresis."

I say long, he was about one hour and three-quarters delivering it, and while it contained much of value from a Cataphoric standpoint, and was evidently the result of long, tedious and painstaking research, it was scarcely the paper to be read at an annual.

It was discussed more or less briefly by

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some eminent gentlemen, the discussion being opened by Dr. William J. Morton, of New York, who is considered authority on "Cataphoresis." Dr. Price had brought out the factor of heat as generated in a tooth and surrounding parts by the electric current, and had some wonderfully close, fine-drawn calculations in regard to it, all of which was new to Dr. Morton, and he did not attempt to follow the abstruse mathematical work of Dr. Price.

Dr. M. L. Rhein, of New York, brought out a new point as to whether the electric current did or did not decompose the tooth structure to a slight depth, claiming in support of his idea that it does do so, the fact that a tooth is much more readily cut after, than before using the current, and as sensitiveness returns the tooth seems harder and more difficult to cut. That is to say, the electrolysis is too much for the tooth structure. Is there not danger of permanent injury, is a question he raises.

Dr. H. W. Gillette, of Newport, R. I., spoke to the paper, parrying the mathematical and dealing with the practical use of Cataphoresis.

Dr. Chas. A. Meeker, of Newark, N. J., preferred to read the paper when published, and discuss it thereafter.

Dr. R. Ottolengui, of New York, splurged his *Ego* as an editor, etc., and then came down to the level of common mortals, and starting with the statement that "ignoramus often empirically reach the truth," asked this pertinent question: How do we know how much cocain we are using at any one given time? He claimed that it would be a good thing if we could always know just how much cocain was entering the tooth structure, and if such papers as Dr. Price's could lead up to such results much would have been accomplished.

Dr. F. T. Van Woert, of Brooklyn Borough, who is also looked upon as an authority in cataphoric matters, claimed that the subject, as handled by Dr. Price, was too intricate for him.

Dr. Price, in closing, became somewhat "rattled" over the questions which were put to him, and an audible smile went around when he described how he had been deceived in a large buccal cavity of a molar, seeing what he thought was an exposed pulp, and finding after adjusting the dam, and after using the cataphoric apparatus, that the exposure was a small piece of the skin of a red apple!

At the annual meeting a year ago Dr. J. Foster Flagg was the essayist. I am reminded of one incident which occurred. He had been interrogated once or twice by a gentleman in the front seat who finally gave his name, and was squelched by Dr. Flagg thus: "Oh! Infinitesimal root-canal filling Shields!!!"

The New York Institute of Stomatology held its second annual banquet at Delmonico's new establishment, Forty-fourth street and Fifth avenue, on the evening of January 14th. About one hundred representative men surrounded the tables. Boston and the East was represented by Dr. Potter and Professors Andrews and Smith, and from as far south as Baltimore, Dr. B. Holly Smith appeared. After the invocation by Rev. E. Wampole Warren, Dr. E. A. Bogue, the newly-elected president, presided with much grace and dignity.

Unfortunately the three gentlemen from Philadelphia, who were scheduled to speak, Drs. Trueman, Jack and Pierce, were detained by illness in their respective families, and some good things expected from them in regard to higher, broader, more liberal education, were not realized. Those who were present as speakers were given "Higher Education" as a sort of text. Hon. Seth Low was the first one to respond, and after saying many nice things about dentists and of them, he concluded with the very apropro remark on "higher education," after Lord Dundreary, who spoke to another thusly: "No doubt but that you can pass the examinations, but can you sustain them?"

His concluding remarks referred to surgery, on this wise: "Ancient surgeons regarded the wound as a great enemy, but when they learned that *they* were the enemy, then true surgery was born."

Horace N. Demming, Esq., of New York, followed with an elaborate argument to show the great difference between the *truly* professional man and the mere tradesman. He claimed that trade motives are never altruistic and that greed always underlies it.

In business "money talks," in a profession *noblesse oblige*. He likened trade to war with the element of physical courage left out. At the close he was compelled to arise and bow his acknowledgments.

Professor Henry Osborn, of Columbia College, argued in favor of a preliminary education as promoting higher education.

Professor Andrews, of Cambridge, followed with discourse in somewhat the same vein. Specialists should have thorough medical education first, then education in selected specialty.

Dr. Porter, of Boston, spoke on Professional Independent Journalism.

Dr. Geo. S. Allan, of New York, seems engrossed in Independent Journalism and inveighed against the patenting of articles by professional men.

Dr. J. Morgan Howe, of New York, scored the editors of the *Cosmos* and the *Items of Interest* in connection with advertising secret forms of filling materials and nostrums.

The C. D. A. held its regular January meeting in Newark, N. J., on the evening of January 17th. Dr. J. Foster Flagg, the "only one," was the "pièce de résistance" of the evening. He "did not do a thing" to Dr. Black, of course. The doctor came on from Philadelphia to "make some history," and we will have it for future generations no doubt.

He seemed to feel it quite keenly that so many of his principles had been recorded in

the "American Text-Book of Operative Dentistry" without giving him the credit due.

The doctor finally reached what he was scheduled for, "Napkinning" and with his manikin showed very cleverly what might be accomplished in the matter of keeping the mouth dry in dental operations without the use of rubber. He says when he cannot control the flow of saliva and keep the work dry—why, then—fill it wet. The doctor's good nature and good talk and good common sense held his listeners, and when at one time he would have discontinued (after having had the floor for almost an hour) but "had so much to tell them," they would not listen to that, so the doctor's vocabulary kept on rolling. We were all glad that the chairman showed the gentleman the courtesy of the floor until he had concluded all he desired to impart.

The Odontological Society held its regular meeting January 18th, with President S. G. Perry in the chair.

Prof. E. T. Darby, of Philadelphia, was the essayist of the evening.

You know that a new amalgam, "Fellowship alloy," has recently been boomed by our genial friend, Dr. Crouse, of Chicago. The formula is *not* given, but *everything* is claimed for it. It may surprise your readers to know that it contains over 5 per cent. of copper. This is the result of an analysis made by Prof. Ricketts, of Columbia College, at the request of Dr. A. L. Northrop, of New York.

Here is the latest in adroit dental advertising. A very attractive young lady—elegantly gowned—visits the physicians of the city. She is smiling all the time, showing a great deal of gold in the way of fillings, etc., as my informant put it—"showing more gold than I ever saw before in one person's mouth, or indeed supposed could be put there." The purpose of the visit is to offer the services of the establishment she represents, at a mere nominal sum for the phys-

cian's own work—at a certain stipulated reduction for members of his family—and other inducements, not all mentioned to me. Of course, so the young lady said, if the physician has his own well liked family dentist, they would not care to interfere, but in case, etc., “ad lib.” Yours,

“METROPOLITAN.”

A Poor Man's Crown.

Dr. S. E. Davenport, in *International*, says a crown constructed of inexpensive materials and requiring comparatively little of the operator's time to prepare it for insertion. The materials of which the finished crown is composed are an ordinary rubber, plain tooth, German-silver wire hammered into any shape that the opening in the root requires, and the ordinary vulcanizing rubber of any color decided upon. The *modus operandi* is very simple. The root-canal being first prepared, a plain, rubber tooth is selected and ground to the gum. The end of the root is ground fairly smooth, but one peculiarity about the method is that, if the palatine or lingual portion of the root stands rather high and is fairly strong, it is not necessary to cut it to the gum, as for most other methods, it being possible to make the crown conform to any irregularity of the root. A piece of German-silver wire, of suitable size, is hammered on the anvil to the proper shape and fitted to the root-canal. The hammering gives additional stiffness, and makes the wire so rigid that there is no possibility of bending it with the ordinary force which comes upon a crown. One end of the German-silver is then made jagged with the file and passed between the pins of the tooth, which are bent to hold it. Red, pink, or white vulcanizing rubber in small pieces is now packed upon the pins and over the wire with a warm instrument, and in sufficient quantity to form a shoulder which will cover the end of the root. This unfin-

ished affair is then put into place, the pin going to its full extent into the root-canal, and the porcelain pressed to its proper position. Before it is put into place it is held over the spirit-lamp to soften the surface of the rubber, and the moistened thumb and finger will form the rubber by pressure accurately to the end of the root. It can be taken out, the surplus of soft rubber trimmed off, and put back again, half a dozen times, if necessary, within a few minutes, until everything seems right, when it is finally removed, invested in plaster in the flask, vulcanized and finished. There are many ideas which can be applied to this method. It has been suggested by Dr. Davenport that wax instead of rubber could be used for the first fitting, particularly when two or three root-pins were to be used, and after everything was adjusted the waxed crown could be placed in the flask, the flask opened, the wax taken out, and rubber packed in. Then, too, bicuspid can easily be formed and made quite slightly by the use of white rubber for the inner cusp. These crowns should be secured to place with zinc phosphate.

DR. W. GEO. BEERS,
DENTIST,
(Practical and Consulting,)
Montreal.

The above card came from our distinguished Canadian friend. He is the first consulting dentist that we have heard of. His lines have surely fallen in pleasant places, that he is enabled to give up active work and stand as a consulting practitioner. If he fills all positions as he fills that of editor of the *Dominion Dental Journal*, he fills them well.

“The Traveling Library—A Boon for American Country Readers” is the subject of an article in the *American Monthly Review of Reviews* which describes a new scheme for popular instruction and amusement.

A Conservative Complaint.

"Conservative!" I was born so. Conservative
I'll be

Till I die. I'll still say, "No modern change for
me,"

For I was born too late, or early, before the
froth

Of newness from this modern world wore off.

I hate the rush of life, the bells, the noise

Of a world wild with new mechanic toys.

The alertness now demanded is too great;

It wears my nerves out; I was born too late.

There was some peace an hundred years ago,

But in another, what? Well, God may know;

But I look for a silence, absolute,

When man has lost his hearing—his acute

And active senses dulled and evolved

By gongs and bells and whistles ever tooted;

And when his eyes have given out trying to see

The truth in a world glaring with electricity.

Even the way of thinking knocks me out,

With all its fad of "Criticism" and doubt;

The old views all exploded, Socialism

And single tax now, and the gorgeous prism

Of colors evanescent, Communism;

When, if they have their way, cut work-hours
down,

We all can live in villas out of town,

And come in once a year and spend an hour

On some artistic task, by electric power.

They haven't spared the Bible or the Creed

Or Ten Commandments, when they twenty
need

To keep men straight and in some better order,

With all our social and political disorder.

The old ways were enough for me; the light

Of gas and candle brightened up my night

Sufficiently to read by; but now, speed

Is the one thing, and nobody takes heed

Who is run over. Infancy and age

Go down, alike, before our new-born rage.

Get there in time, no matter whom you crush.

Hospitals everywhere; if, in the awful rush,

The victims of our scramble chance go under,

The surgeon, ready, saws you quick asunder,

Or puts together, or restores lost members,

Or fans the spark of your expiring embers.

I loved religion; 'twas so satisfying,

So good to rest on when it came to dying.

You can't rest on philosophy securely;

Marcus Aurelius did, but somewhat poorly;

But we can't all be Romans, and this science,

It seems to me, is a pretty poor reliance.

It tells nothing we want to know, but only

About antiquity, and makes me lonely,
Babbling about survival. If we all die,
Being run over, as we faster fly,
How will the last survivor feel, the fit one,
Who lived it out when all the rest were gone?

And there's Selection and Ancestral Traits,

And theories of Heredity; it grates

Upon a mind like mine to hear men chatter

As tho' the whole affair were any matter.

For I have traits that must have far descended

From several thousand years back, somewhat
blended,

But all agreed on one point: I had rather

Than be my grandchild, be my old grandfather.

—*Health Magazine.*

Lactic Acid in Riggs' Disease.

After thorough removal of deposits, Dr. Younger says he uses lactic acid to create an irritation to excite granulation, protecting surrounding tissues by applying glycerine and covering with cotton. He floods the pockets, leaving the lactic acid there. At a subsequent sitting chlorate of potash, as strong as can be borne, will be found very soothing. He only uses tincture of iodine in cases of excessive inflammation.) Deposits should be *thoroughly* removed and pockets properly cleansed of blood, serum, etc.; when one application, "once for all" will be all that is required. Failure in these respects entails failure in treatment. Success is obtained in 96 per cent. of cases. Lining membrane will be exfoliated, contraction follow, and gum cling closely to the root again. If syringe-point can be introduced at end of week, treatment has not been thorough and must be repeated. Lactic acid is best kept in small test-tube, and can be liquified over alcohol flame. If not warm it causes too much pain—*Stomatologist.*

Can't we keep hammering at the question of dental surgeons in the army and navy until we indent the idea into a reality?

Sambo has just called to know where the "tooth dentist's" office is.

War Upon the Knife.

Surgical interference in the treatment of appendicitis has been attended with such signal success, we are not a little surprised to note its condemnation by leading men in the profession.

Dr. M. O. Terry, of New York, a physician of acknowledged ability, in the *Medical Times*, says:

"Evolution is all right, but he had noted no great changes in the appendix for ages in man; therefore he believed that the Creator left it there, not for the knife of the surgeon, but for some purpose."

As a substitute for the knife he prescribes the following:

"At first cathartics of castor oil and sweet oil followed by hot water are given until the bowels are thoroughly cleansed out. This treatment is followed by enemas of glycerine and sweet oil. Flaxseed poultices soaked in sweet oil are kept on the abdomen. The diet is restricted to very light, easily digested foods. The oil treatment removes the friction of the inflamed tissues and relaxes them during resolution. In this way, he says, he has cured cases of chronic, recurrent appendicitis. To prevent a return of the trouble after the original treatment, he prescribes a tablespoonful of sweet oil, followed by a glass of hot water, before each meal for several weeks."

Dr. Terry says that out of fifty-one cases thus treated, forty-nine made good recovery, which is, he claims, a better showing than any yet made by the surgeons.

The marvelous achievements in modern surgery have no doubt led many enthusiasts of the knife to operate when a more conservative course of treatment was indicated. If the operation is undertaken before the surrounding tissues become seriously involved, of course, the best antiseptic precautions observed, we see no reason why the percentage of failures should be greater than by Dr. Terry's or anybody else's therapeutic method.

This, however, is no fight of ours, but it is of sufficient interest to the general public to warrant at least a passing notice.

J. A. C.

Power for Dental Engine.

After looking at the pictures of city offices in a journal and reading the descriptions thereof, I thought possibly some one among the great number of dentists in the smaller towns might be looking for a suggestion as to the best plan for some improvement in his office.

Very few of us have the advantage of a day current in the small towns, but do have city water. After waiting for several years for a day current from our electric light plant, I put in a water motor to run my lathe. That was very nice, but I had a foot engine and so long as I had a girl to run it, all went well until she got married and I got a laboratory man and I had to run my own engine.

Then it was that I decided that it was too hard work, as it was one of those beautiful white engines with a big wheel. I soon decided to put in use my water motor to run my engine. I purchased the Mason speed controller and attachments and slipped the engine head onto the ceiling rod and connected the controller to my one-eighth horse-power water motor in the laboratory, and now have very nice power to run my engine.

The foot-switch is almost as convenient as the foot-switch for the electric motor.

I would just as leave have the water power as electric power, as it is much cheaper; costs me nothing more to run my engine than to run the lathe alone. It is even and steady, and altogether more satisfactory than to run the engine myself, or to depend on an inexperienced assistant; saves time, gets one thing more off the floor out of the way, and the power is never looking out of the window.

EPH.

LeMars, Iowa.

THE
American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription \$2.00 per year; \$1.00 for six months—including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, February 3, 1898.

Give Us His Name.

A certain well known dentist not a thousand miles from Atlanta, was a very recent defendant in a justice court over a disputed account.

This is simply an incident which brought out a remarkable statement by the attorney for the defense.

As we are credibly informed, the evidence was against the dentist and as an offset, or extenuating circumstance, the lawyer told the court that his client was the only dentist in America who treated successfully *certain pathological conditions of the mouth.*

The dentist referred to in such eulogistic terms has been highly honored by his confreres; has been industrious in upholding the dental law of his State, and a strict constructionist of the Code. We are, therefore, naturally solicitous to know where the attorney got his information as to the exceptional skillfulness of his client.

If it be true that there is such a man in the State, it is the pleasure, as well as the duty, of a wide-awake journal to give the facts. We have a local pride in this matter, especially so since it has been charged that we grow nothing here but "irreconcilables."

As Georgians, we have been boasting for a long time of two historical figures, namely: Whitney, the inventor of the cotton gin, and Crawford Lang, the discoverer of anæsthesia. And now it seems we are upon the eve of another discovery!

Instead of the fact becoming known through the natural channel, it is reserved for a lawyer, in a justice court, to incidentally (?) develop and to make known his discovery, that out of thirty thousand practicing dentists in the United States, his client was the only one who treated successfully certain oral diseases.

We have been told that men by the name of Clements, Younger, Talbot, Kirk and Pierce have been working at this problem for years. These gentlemen can now cease from their labors. They simply are "not in it."

In due time we hope to be able to induce the aforesaid attorney to give us the name of his informer, and the rest will be comparatively easy.

J. A. C.

Uniformity in Dental Laws.

The idea of uniformity of dental laws in the United States is a very estimable one, but it seems slightly utopian—too good to materialize. There is but one standard that could obtain, and had that been recommended and pushed by our National associations when the matter was agitated some time since, there is not much doubt but that many of the States would by this time have so amended their laws as to be practically a unit upon the subject of dental legislation. It is this: A person having graduated at a recognized school and having

his diploma verified by examination before our State Board, should be eligible to practice in any State without further examination. This, however, was only partly suggested. It was recommended that each State so amend its laws as to permit a person who was licensed after examination in any other State, to practice therein without further examination. We have failed to see any results from this recommendation, and we will continue to see none. The idea does not appeal to the good sense of the dental profession, from the fact that he who does not qualify himself in a dental college cannot be an educated dentist, although he may succeed in passing a State board of examiners.

D. D. ATKINSON.

A Peculiar Accident in a Vulcanizer.

I had just finished vulcanizing a full upper case and in great haste put the hot vulcanizer under a spigot and turned on a heavy flow of water. A deep, heavy thud sounded inside.

It was the sudden collapse or condensation of steam and was just the reverse of what an explosion would be.

So violent was the shock that on opening the vulcanizer I found all of the plaster forced out of the flask and the entire vault of the plate broken out, the whole work a complete wreck. It only demonstrates the old adage, "The more haste the less speed." This happened long ago, but it is one of those lessons which are born of experience.

The fact is, a rubber plate will be tough in proportion to the time and care used in vulcanizing. It is a good rule, if you can do it, to vulcanize at a low temperature and let the vulcanizer cool without the application of cold water, or, in other words, let it remain over night. An accident such as cited above may not occur again, and very likely will never in my practice, but cooling suddenly will render the rubber brittle and

ought to be avoided for that reason. There were circumstances which called for haste in the case cited, but they did not call for such haste as would ruin the whole case.

D. D. A.

Original Thought Not Always Properly Credited.

Fifteen years ago the Southern Dental Association met in Atlanta, and from there an excursion was made up for Tallulah Falls. That was a jolly party of good, whole-souled, noble fellows.

It is interesting reading to take those back numbers of the *Southern Dental Journal*, that noble journal which fought so hard for the upbuilding of dentistry under the able management of its founder, Dr. Catching.

At that meeting of the Southern, Dr. Catching pleaded for a representative National Dental Association, to be located at Washington, D. C., so that a museum and library might be founded to preserve things of historical and representative value to our profession.

Fifteen years have passed and the National is a reality. Not located at Washington City, however, but exists in a little different form. The museum and library have also been started on a substantial basis. May not that speech before the Southern, which has long ago been forgotten, have been the germ which has ripened into a reality?

Before January, 1884, we find mention of this subject, but in that issue of the *Southern Dental Journal* we find an editorial, from which we make extracts as follows:

"At the last meeting of the American Dental Association, Doctors White, Lovejoy and Fuller were appointed a committee to consider the matter of disbanding the American or reorganizing that body. They reported: 'As the purposes of its organization have apparently been subserved, we respectfully suggest that the same be perma-

nently dissolved.' We again call up the question of the importance of strengthening and building up the National Association with permanent lodging in Washington. The United States of America are not represented in a national body as they should be, when we consider that America leads the world in dentistry. The honor of the country demands that the world should know, from one grand association, what is being done in every State of this Union. * * * * By proper management a meeting of influence and importance can be had during the summer. That body should be composed only of delegates elected by State Associations, allowing each State the same number of delegates. * * * * The need of a National Dental Museum is manifest to all. There should be gathered together at some convenient point, and no place is more suitable than Washington, everything of general interest to the profession. * * * There is nothing so feasible, nothing so practical as the building up of this National Association and Dental Museum, and we cordially invite any to the pages of the *Southern Dental Journal* in furtherance of its object."

Though this was written by Dr. Catching fifteen years ago, it reads as if it were written for the needs of the present day, and when we wrote on this line in more recent editorials, we were not aware that such ideas had ever been advanced by him.

In this same year (1883) the National Association of Dental Examiners perfected a permanent organization at Niagara Falls.

Doctors John H. Coyle, J. Taft, James Lewis and A. W. Harlan were appointed a committee to draft a law to be sent to the different State societies, to be used by them as a guide, so that when they should decide to ask for a law and it should be granted by their legislatures, the new laws would thereby be uniform. Strange to say that though the committee who drafted the new Georgia law had no recollection of ever

having seen a copy of this law drafted by the National, they are almost the same *verbatim*, with the exception of the revocation clause, which the Georgia law contains and theirs did not.

In that same year Dr. S. M. Prothro, of Chattanooga, Tenn., describes an electric engine outfit which he had roughly rigged up for himself, which embodies the exact ideas and claims of a well known machine now being extensively advertised.

When we look over the past records, we wonder if there is really anything new.

H. H. JOHNSON.

Sweating Gold Together.

To know how a thing is done, and to do it, are two different things, sometimes. To sweat a gold band together is very delicate gold working. Here is the way Dr. Guilford says to do it in the *Stomatologist*:

"A neat way of uniting the edges of the band is by the process known as 'sweating.' To do this the strip is cut a trifle longer than the indicated length, the edges beveled, one outwardly and the other inwardly, and the strip bent so that these beveled edges will overlap and rest against one another. No binding wire is needed. The band is now laid upon a suitable support, a little borax applied to the joint, and the blow-pipe flame directed upon it. The whole band must be heated to a red heat and then a small pointed flame directed entirely upon the joint. Just before the melting point is reached the edges will unite and the flame must at once be removed. The operation is a delicate one, requiring care and some experience, but the result is the best that can be obtained. Through the absence of solder the joint will be as soft and pliable as any other portion of the band, and no mark of union will be noticeable after polishing. The subsequent enlargement or stretching of the band (when necessary) will also be more easily accomplished than when the union has been made with solder."

Ethics Again!

Professional advertisers—those who openly defy the code and those who profess to be ethical, but cunningly manage to keep constantly before the public, come in for some exquisite roasting by Dr. H. E. Harlan, in *Dental Register*. He characterizes the open advertiser as a gentleman worthy of our respect; but for the man who utilizes every public function to which he may be an invited guest; or “who joins the leading church and attends all the means of grace with a pocketful of his cards”; this unique, but common style of advertiser, is roundly denounced in language none too severe.

This brings us to observe that this latter class of ethical hypocrites are equally well known and criticised by the laity. Their ill concealed motives are easily defined by even the most obtuse, and their presence acts as a constant mental emetic to all decent people.

Should these subterranean methods fail to “pan out” as you had confidently expected, you may know the reason why.

J. A. C.

The Maryland State Dental Society recommended as an addition to their state law, that graduates of dental colleges having received certificates from state boards by examination, be exempt from further examination in our state.

As this seems to be a radical movement, it is hoped that other states will be encouraged to follow the example of Maryland in this respect. Very truly yours,

B. HOLLY SMITH.

A Good Idea.

Dr. Tom Crenshaw, always full of resources, suggests that a hot-air blast thrown upon the parafine, will melt and distribute it over a cement filling with uniformity, and encourage its flow in close approximal surfaces.

The Professor.

Evidently some of our medical contemporaries have not a very high regard for the professor, as is shown by the following taken from *The Journal* and quoted in the *Maryland Medical Journal*:

Any one can become a professor of any subject, providing he has the proper amount of influence. If no vacancy exists a new chair is created for his benefit. It does not matter whether he can teach or not; that is a minor consideration. All he needs to do is to compile a text-book, tell the students to buy it and require daily recitations from this book. A book is very easily compiled; buy a few German and French books, translate them, or ask others to run over two or three late English and American books, get plenty of illustrations, change a word here and there, and the book is complete. If the publisher owns a medical journal, favorable reviews and plenty of advertising finishes the job, and the title of professor helps to sell the compound.

An Aphorism.

There is an adage which I never heard but once, but have thought of a thousand times since. Gentle reader, you will think of it, too, after this. I have thought of it, when a patient would complain because the wax trial plate did not fit tightly. I have thought of it, when in selecting a shade tooth they would complain that the tooth was too large. I have thought of it, when they complained that base plate wax was not the right color for the gum. I have thought of it, when they would have the horrors for fear I would put models, articulator and all in the mouth to take a bite. I have thought of it, during many of the innumerable operations at the chair. It came to me from an old Scotchman, and is this: “Fools and children must not look at an unfinished job.”

ATKINSON.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., FEBRUARY 10, 1898.

NO. 22.

CONSIDERATIONS RELATING TO THE LOOSENING OF THE TEETH.

In a remarkably well-written article in the January *Ohio Dental Journal*, Dr. Hugh B. Mitchell, under the above head, gives his views upon the cause of what we recognize as pyorrhea alveolaris. The doctor quotes on general principles from such eminent authority as Darwin and Professor Schmidt to show the effect of disuse of an organ on heredity and the consequent elimination in some cases and impairment in others of its function. His conclusion is that disuse is the prime cause of the loosening of the teeth and is a correlative factor in the cause of pyorrhea alveolaris. Although he gives full credence to the theory of Dr. Pierce of the uric acid diathesis, he quotes from Mr. Darwin thus: "It is well known that use strengthens the muscles in the individual, and the complete disuse or the destruction of the proper nerve weakens them. When the eye is destroyed the optic nerve becomes atrophied. When an artery is tied the lateral channels increase not only in diameter, but in the thickness and strength of their coats. When one kidney ceases to act from disease, the other increases in size and does double work. Bones increase, not only in thickness but in length, from carrying greater weight."

"No dentist," says Dr. Mitchell, "can have failed to mark the results of this principle of compensatory adaptation on the

teeth." In many cases teeth used under proper limitations for the attachment of bridge-work seem to grow firmer under the added stress of mastication and give sorry evidence of our improved cemento-alveolar innervation.

In cases where the teeth have been entirely or partially lost, the gums become hard and unyielding through their continued use in mastication, indeed to a degree of practical efficacy in many cases. When the molars are lost the anterior teeth (and especially it has been noted in the lower) respond to the necessities of the emergencies with something like a positive aptitude for hard work, giving every evidence of a healthful response to the wholesome stimulus of increased exercise. Those who have had occasion to test with forceps the integrity of the molar attachments of an habitual tobacco-chewer have doubtless found the experience a source of both exercise and profitable reflection on the effects of use; and whatever else may be said of the habitual chewing of gum by children, it must be admitted that those in general who use it have a long advantage in every aspect of oral hygiene over those who do not.

Nature economizes her energy too closely to long tolerate a useless organ. The disuse of an organ invariably tends to its abortion. Dentists are familiar with the fact that a tooth for any reason deprived of its occlusal antagonist, seems to abandon its normal relationship to the alveolus and protrude much beyond the mean line of occlusion.

We term teeth in this condition "elongated." It would be nearer the general truth to say that they are partially aborted. Under such circumstances there are present in time the evidences of atrophic changes which in many effect the complete detachment of tooth from socket. The duration of this process is, I am well aware, modified by the normal integrity of the alveolus and due regard to oral hygiene; but the calcareous and even purulent concomitants of this condition are not to be confused with the prime cause, the diminished use of those teeth. The relative use and disuse of the teeth is therefore an important part of the field of clinical inquiry, especially in those obscure morbid afflictions of evident constitutional origin.

In studying and comparing the dental aspect of this diathesis, I have been prompted to believe that its clinical exhibition is most manifest in those teeth of the individual less subject to habitual use, notably the incisors.

The ingestion of rich nitrogenous and easily masticated foods and the consequent diminished use of the teeth are coexistent and correlated factors in the evolution of gouty pyorrhea alveolaris.

The treatment of a constitutional vice, inherited or acquired through years, of over-indulgence in eating and drinking has but few aspects which are free from discouragement to the dental practitioner.

Without discrediting the value of constitutional treatment for the elimination of uric acid compounds, it is a matter of immediate and practical concern to us to discover and remedy, if possible, the local conditions so peculiarly alluring to the deposition of these salts. I believe that the chief of these conditions is the vital depression and functional inertia of disuse.

The treatment of teeth indicating a liability to the local exhibition of this diathesis must, therefore, contemplate their

more active use. And in the advanced or suppurative stage of this affection, constitutional treatment and the conventional local instrumentation for the removal of calcic deposits must be supplemented by the appliance of retaining devices, or splints, to effectually and permanently prevent the undue luxation of the loosened teeth during their use, and re-engage their occlusion." A.

AS THE FACULTIES' AND EXAMINERS' DISPUTE LOOKS TO AN OUTSIDER.

BY W. H. WHITE, D.D.S.,
Silver City, N. M.

The controversy between the National Association of Dental Faculties and the National Association of Dental Examiners presents some features which are very common in the transactions of ordinary humanity. It seems that so long as the Examiners passed rules which forced the student to take more courses of lectures and longer courses of lectures, and thus brought more fees to the colleges, and especially when the five years previous practice ceased to deduct any of the time required to prepare for examination, thus forcing all the dental education of the country to the college mill, the Examiners were a great and glorious institution. But when the Examiners saw fit to supervise the previous preparation of applicants to dental colleges, and thus to curtail the latter's omnivorous instincts, then the Faculties rose up in righteous indignation and demanded to know if they were not "a bigger man than old Grant?"

Now while I have a profound respect for the great knowledge and acquirements of the Dental Faculties, and while I realize the great power for good that rests in their hands, unfortunately it is the experience of humanity that great knowledge and great power do not usually deter a man from following the course of self-interest, even

when that course is detrimental to public welfare. It is still more common experience that a public servant attends to public affairs better than a dictator.

The National Association of Dental Faculties is an entirely irresponsible body so far as the ordinary member of the profession is concerned. On the other hand, each member of the National Association of Dental Examiners is responsible to the State Board of which he is a member, and this State Board is indirectly amenable to the sentiment of the dental practitioners within its borders. The National Association of Dental Examiners is the most representative body connected with the dental profession; it has the legal status, and is the natural mouthpiece of the general practitioners of dentistry throughout the country, and it should be fostered and upheld by them until it becomes the court of last appeals in all matters pertaining to dentistry.

While I am one of those who believe that some dental education worth having may be acquired outside the colleges, I realize the paramount influence for good and the absolute necessity of the colleges to the profession; still, I think they will do the profession more good as servants than as masters.—*Dental Digest*.

An Opening.

When the spring opens—about the time the colleges close—there will be a fine opening in Dawson City, Alaska, for several score of young dentists. It is estimated that 200,000 people will go to that country at that time. Go, establish a dental depot, issue a quarterly and soon a college will follow. Nothing like enterprise.

Make your arrangements for a week off, to include the time of St. Augustine meeting, February 22d.

Wake up! and send that item for publication! You have gorged long enough.

Worry.

Psychologists and mental philosophers are discussing a subject which should arrest the attention of every one especially that class known as pessimists. In a recent number of *Pharmaceutical Products*, the author says:

"Modern science has brought to light nothing more curiously interesting than the fact that worry will kill, and the way in which it kills is stated to be that worry injures beyond repair certain cells of the brain. The brain being the nutritive center of the body, the other organs become gradually injured, and when some disease of these organs or a combination of them arises death finally ensues. Occasional worrying of the system the brain can cope with, but the iteration and reiteration of an idea of a disquieting sort the cells of the brain are not proof against."

Medicine will not correct this unfortunate mental tendency or condition; but there is a little volume of recent issue, which, if carefully read, will beautifully unfold a world of information on this and kindred subjects, that cannot fail to help you overcome what we call worry.

We refer to "Menticulture of The A B C of True Living," by Horace Fletcher.

J. A. C.

Headache Powders.

Headache due to prolonged dental operations can be relieved by the use of the following:

Acetanilid.....	5 grains.
Sodium bicarbonate.....	10 grains.
Caffeine.....	1 grain.
Make into one powder.	

—*Stomatologist*.

Investment for Small Pieces.

For crowns, etc., Dr. Guilford uses as an investment, plaster three parts, clay two parts, pumice two parts. He says, correctly, that the investment should not be made too thick.

Difficulties in Burmah.

We sometimes think our lot is worse than any one's, and that we have troubles which no one else could have.

We have an easy time, good climate and a great many luxuries which are not experienced in Burmah and probably some other places. Below is an extract from a letter written by Dr. E. W. Bonwill to the *Dental Brief*:

Rangoon is, I think, the worst climate in the world for a dentist, in fact for any one even, to live in. For six months we have a most terrible rain, night and day. Then, often, during the rainy season, in the middle of the day, I am obliged to send patients away till another day, it being so dark I cannot see to do the work properly. My instruments will rust badly over night, and therefore have to keep a Burmah to do nothing but keep my instruments clean during the rains. The remaining six months a drop of rain never falls; sunshine all the time. The climate is always the same, intensely hot. To get a breath of fresh air we must take a sea voyage or go to the mountains. The latter trip means traveling on elephants or in bullock carts for days in the terrible tropical sun.

Nothing can be more severe on gold than the rain here; yet, as I said before, I have never had the slightest trouble. My method is this, very simple: Prepare the cavity and put rubber-dam on, and, as all know, whether in the tropics or elsewhere, the rubber must be tied around the teeth perfectly; then with a little chloroform I dry the cavity, keeping it covered all the time by a perfectly dry napkin to keep it from the damp atmosphere. My gold is cut and ready, but not annealed. Each piece, as I am ready to use it, I am always sure to heat till red hot, then, allowing enough time to cool, I quickly insert into the cavity and thoroughly condense with the mechanical mallet. As soon as I have thoroughly malleted this piece I quickly press dry napkin into cavity and commence with next piece.

Lower Plates.

Lower plates are a great source of trouble to patient and operator, and anything at any time that may shed any light is acceptable. Dr. Haskell, in *Dental Brief*, writes as follows:

To secure impressions of flat jaws use a narrow, flat impression tray. Take the impression in modeling compound, extending it over the top in order to hold in place. Trim away the margins, and in this take a plaster impression, requesting the patient to thrust the tongue out of the mouth.

As a rule rubber, makes as satisfactory a plate on the lower jaw as any material, as absorption takes place to a greater extent on the lower jaw than on the upper, no matter what the material, for what reason I am unable to say, and in failing to relieve it, the plate does not show as much.

Few are aware of the fact that absorption sometimes takes place on the lower jaw to such an extent that the bunch of nerves, the mental ganglion, between second bicuspid and molar, is exposed on top of the jaw, instead of its normal position on the side. When this occurs there is, of course, a very sensitive point on which the plate may not rest. For some unexplained reason this occurs usually on the right side.

Extraction during Acute Pericementitis.

An interesting symposium of views on this subject was presented by Dr. Pannele and published in *Dental Cosmos*. About thirty men of prominence expressed themselves freely and all except two were in favor of extracting under any ordinary conditions, provided of course, the tooth was such that it was doomed to be lost. Two were in favor of treating until the inflammation should subside and then extract.

Of course a man very often does himself an injustice in expressing himself freely on what he would do in *supposed* cases. I am

somewhat like the Supreme Court in such matters. I dislike to rule on a point until the case is presented. There may be some extenuating circumstances. Dr. J. Hall Moore said he could not conceive of a case where it would not be proper to extract such a tooth.

Dr. G. V. Black advises extraction and admits the danger of sepsis, but believes the danger is reduced by extraction rather than augmented.

Dr. Wm. J. Rider says he could scarcely understand how an intelligent dentist could refuse to extract under such conditions.

Dr. Thos. C. Stellwagen says, it is not under ordinary circumstances proper to extract teeth that are in a condition of acute periodontitis. He advised reducing the tissues first to a normal state.

Now, there is no doubt that these gentlemen who are so emphatic in advocating extraction in all cases at all times, do themselves an injustice. There are, doubtless, cases where they would not extract immediately. Such statements, made under such circumstances are very misleading to young practitioners and unsatisfactory to older ones. We should be careful how we put ourselves on record, it might be embarrassing sometimes.

H. H. J.

A Source of Irritation.

We occasionally find a very sensitive spot on the lower jaw in the region formerly occupied by the bicuspid teeth. The following from Dr. Haskell, in the *Ohio Dental Journal*, will doubtless be of value in diagnosis of this malady:

"Some years ago, on a visit to Ann Arbor, I heard Professor Ford lecture on the bones of the head. In the course of his remarks he said: 'I will show you where absorption of the lower jaw has taken place to such an extent as to bring the mental ganglion to the surface of the jaw instead of a half inch or more below it, as when the jaw

is in its normal condition.' He showed a lower jaw with the opening directly on top.

"This explained what to me had been a mystery in several cases, where there was a very small spot in that locality (the region of the second bicuspid), which was excessively sensitive. Since then I have had several similar cases. . . . The only thing to be seen is a white spot about the size of a pin's head."

Cocain and Eucain—How to Distinguish and also Detect a Mixture.

The excessive solubility of hydrochlorate of cocain permits its being distinguished from hydrochlorate of eucain, for eucain is soluble one part in nine of water, while cocain is soluble in less than its own weight of water. To detect eucain that may be fraudently added to cocain, because of its costing less, Vulpus states that by dissolving gr. 10 of the suspected salt in 50 cc. of water and then adding two drops of aqua ammonia, if the cocain is free from eucain the liquid will remain clear, even though a few crystals may be deposited, whilst if eucain is present the solution becomes cloudy or milky in appearance.—*L'Odontoligique*.

Blood on the Moon.

Several of the leading journals of the January issue, are calling each other ugly names.

This is not an error or fault of the head, but in our opinion (if we may be allowed to venture one), is attributable to a very disordered liver. Calomel *might* put a different phase on future editorials; but we would suggest to those excellent gentlemen that a temporary change of air, water, and diet might act equally as well, and this can be had at St. Augustine, February 22. Try it.

J. A. C.

WHAT WE ARE COMING TO.

We have boiled the hydrant water,
 We have sterilized the milk;
 We have strained the prowling microbe
 Through the finest kind of silk;
 We have bought and we have borrowed
 Every patent health device,
 And at last the doctor tells us
 That we've got to boil the ice.

—Retail Druggist.

Dental Law in France.

It is only since 1892 that the dental profession of France enjoys a law which has been very instrumental in raising dentistry to a higher standard during this short period.

Previous to 1892 any one could practice dentistry, says Prof. Ch. Godon in the *Schweizerische Viertel Jahresschrift*, any proof of ability being entirely unnecessary. During that year a dental act was passed which admitted to the practice of dentistry only those dentists and physicians who, after a three years' course, had obtained a diploma from the government. Graduates from foreign colleges have to submit to the same law, but they can be credited with the time they studied at those colleges and are given a reasonable term during which to prepare themselves for the examinations.

All dentists who had been practicing before January 1st, 1892, were allowed to practice, but could not use anesthetics any more without the help of a physician. This law called into existence two categories:

1. Dentists (dental surgeons) who have obtained the diploma and give narcotics independently of physicians.

2. Dentists who do not possess this diploma and have to call a physician to give an anesthetic.

There are, of course, mechanical dentists, whose work is limited to prosthetic dentistry.

Three dental schools, two in Paris and one in Bordeaux, have been opened since,

which, while under private management, are under the supervision of the government and run on the plan of the best foreign colleges. Preliminary requirements and studies are similar to those in this country and in England.

At the end of the third year examinations, are to be passed before a board of examiners of three, under the direction of a professor of the medical faculty. The members of the board, partly dentists, are selected by the government.

The subjects to be passed on are the following:

First examination: Fundamental anatomy and physiology, special anatomy and physiology of the oral cavity.

Second examination: Fundamental pathology and therapeutics, special pathology of the oral cavity, materia medica and anesthesia.

Third examination: Clinical work, diseases of the teeth and general sufferings connected therewith, operations, preparation of the mouth previous to the insertion of a denture.

F. A. B.

Born with Teeth.

I was called to see a child ten days old who was born with five teeth—four upper incisors and one lower. They were loose and interfered with nursing, so I removed them. They consisted of enamel caps attached to what seemed to be pendulous gum tissue. The free edges of the enamel in some of them did not extend to the gum-level. They are frail, little shell-like pieces and can be easily crushed between the fingers. The child seemed robust, but when it was several months old the physician discovered catarracts in both eyes, and also tuberculous symptoms.

In closing, allow me to express my appreciation of THE AMERICAN DENTAL WEEKLY.

F. W. STIFF.

Richmond, Va.

Don't Fail to Attend.*Editor American Dental Weekly:*

DEAR SIR:—The grand old Southern (now the Southern division of the National Dental Association of America) will hold its first meeting at the Ponce de Leon hotel, St. Augustine, Fla., on the 22d of February, and as chairman of the executive committee it affords me pleasure to announce that the various committees have been untiring in their efforts and can now promise a larger number of interesting papers and instructive clinics than at any previous meeting. The president, secretaries and committee of arrangements have left nothing undone that would tend to insure it a glorious success. We earnestly appeal to every dentist, who feels an interest in the advancement of our profession, to come and bring with him, if possible, a contribution in the way of a paper (ever so short) or his instruments for conducting a clinic (operative or mechanical), as he may prefer. An expert application of the X-ray, together with demonstrations of the latest and most approved methods of practice, will constitute an interesting feature of the program.

Fraternally, W. T. ARRINGTON,
Chairman Ex. Com.

Non-Cohesive Foils Made Cohesive.

Any of the non-cohesive foils, with one exception, which is not a pure gold foil, can be made cohesive by continued annealing; and all of the cohesive foils without exception can be made non-cohesive by exposing them to the fumes of ammonia.—*Pacific Medico-Dental Gazette*.

If the soft gold here alluded to "is not a pure gold," whose is it, and what is in it?

Does our contemporary enjoy the special confidence of this particular gold-beater, which enables him to speak so confidently?

Don't be ashamed to send the little practical items. The practical goes a long way towards making life in any department.

Practitioners as Teachers.

We once knew a professor who, being very busy with practice, would sometimes find himself compelled to go before his class without having made any previous preparation for his lecture. Being good at jokes, he would, on such occasions, entertain the students for an hour in that way. Dr. John S. Marshall, in an article before the Southern Dental Association, speaks interestingly on the subject. He says:

"A large majority of the gentlemen who occupy positions as teachers in our dental schools are busy practitioners, whose time is most fully occupied by professional duties, but who for the love they bear the profession, are willing to give the best of the energy left to them each day to preparation for the duties of the lecture room. Not one of these gentlemen, however, would say that such effort is the best that he is capable of doing had he more time for preparation and more energy to put into it. This objection can never be overcome until such time as men of wealth will endow these institutions, and thus make it possible for the schools to pay their professors a salary that will be sufficient to preclude the necessity of keeping up a practice for the sake of the income. Under such circumstances the entire time of the professors could be given to the duties of teaching and of original investigation, conditions which are greatly needed, and devoutly to be hoped for.

Another class of teachers go before their students with evidently some preparation upon the subject to be taught, but who frequently side-track themselves over the relation of some pet case in practice, and never get back to the text again that day. While another class, all too numerous, often enter the lecture room with little or no preparation, and simply talk against time, rambling over the entire field comprehended in the curriculum, and when the students leave the lecture-room they know no more than when they entered it, while their minds

have become so befogged by this hodge-podge to which they have listened, that they have no clear comprehension of the subject supposed to have been taught. This is not an overdrawn picture, for many of you know of like conditions, and the causes which have produced them."

Permanent Fillings—So-called.

As we grow older in practice and begin to realize how difficult it is to save teeth even when we use our best efforts, it is no wonder that we often become discouraged and ask ourselves the question: Are there really such things as permanent fillings? Are they not all temporary? Do the gold and other so-called permanent fillings really save teeth for a much longer period than the temporary fillings? Of course our gold contour extremist is ready to bob up and tell of a long line of successes with not enough failures to break the monotony. This is not intended for him, but for the ordinary, conservative men who have failures. We have found one other man who is in doubt about the permanency of fillings. In an article on this subject Dr. C. F. Hartt, in *Dental Review*, says:

"The trouble with us gold-workers is, that in the first place we do not know how to mix a cement, nor how to insert it, nor how to finish it. Why? The answer is easily given: because we have no confidence in the material. Why is it that we see so-called cement or bone fillings, in the mouths of patients that have been inserted across the ocean, five and ten years ago, whereas we tell our patients that fillings of this kind do not last more than two or three years. The only solution in my mind is that we do not know how to handle the material, though we may know how to insert beautiful gold fillings."

"What the relative lifetime of any filling is, is something we must determine before we condemn the cements for permanent fill-

ings. I think the average life of a filling of the average practitioner is not more than five years, though we see fillings that were inserted twenty-five or thirty years ago. Of course, each one of us will say, 'I am sure my fillings on an average will preserve teeth for a longer period than five years.' I, however, have the privilege of doubting this."

Capped Pulp, Filling Roots, Etc.

October 31st, 1896, I filled badly decayed lower molar thus: Tooth painful, patient wanted it extracted. Removed decay with large spoon excavators, found nerve exposed, made paste of iodoform, tannic acid, oxide zinc and oil cloves; cut lead cap to fit over bottom of cavity, cupped it with ball end of small plugger; filled cup with above paste, had cement mixed ready, dried out cavity with paper; placed cap and paste in place, covering exposure, put cement over lead cap, as soon as set filled with alloy at once. Boy left with tooth easy, all in less than an hour. Frequent inquiries since, answered that the tooth has not given any trouble, and is *all right*.

I fill root-canals with gutta-percha points softened with chloroform, immediately after removing nerve and arresting hemorrhage. Make points of base-plate gutta-percha, rolling with warm spatula.

If you want to be sure you have filled the lower molar and bicuspid roots, put a drop of the liquid of your cement in pulp chamber, add a little powder to it and *churn* it with an old worn-out broach. The liquid will not go down till you add the powder and churn it, thereby mixing cement in nerve canal. If it don't go to the bottom it is because you don't carry the broach there.

Why will even nicely finished gold fillings sometimes turn "as black as your hat" in a few months.

J. S. N. SNOW.

Quitman, Ga

To harden plaster, boil in paraffin. To give your plaster casts or models the appearance of ivory, boil them in pure white wax.

THE
American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - ATLANTA, GA.

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription \$2.00 per year; \$1.00 for six months—Including Canada and Mexico. Other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited. The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, February 10, 1898.

Professional History.

It is sincerely to be hoped that the resolution offered by Dr. Hunt, at the meeting of the National Dental Association, at Old Point last summer, will result in progress toward obtaining a full and authentic history of the dental profession, not only of America, but throughout the world.

It has been a thing to be deplored that such an important duty should have been almost completely neglected for so long. We say almost, because there has been some little effort in this direction at different times in the past. Nothing, however, of any great pretensions has been done in this way. The matter should not be delayed one day longer than is absolutely necessary. The longer matters of this character are delayed in being recorded, the harder it is to get at the truth, and history should be nothing more nor less than recorded facts.

From an article on this subject by Dr. Charles McManus, in the *Dental Cosmos*, we

have taken some data bearing on the subject. The only work of this kind of a purely historical character is a book of 272 pages entitled, *History of Dental and Oral Science in America*.

This was written about twenty years ago. The latest work of which we have any knowledge was written and compiled by Herman Lennmahn, D.D.S., entitled, *World's History and Review of Dentistry*. The compilation of the different dental laws of the world consume almost the entire space of this book.

The committee on History of the World's Dental Congress seems not to have been able to accomplish anything of consequence, and thus the matter stands.

We have a profession whose development has been without a parallel, and the younger men entering know comparatively nothing of its past, and have no source from which to obtain information. We should have a history, full and complete, written by such authority that it could be indorsed by our national body. The resolution should receive the proper consideration at the next meeting of the National Association.

H. H. JOHNSON.

Bravo! Senator Chandler.

The "Teller resolution" and "Cuban question," together with other divers preambles, have consumed so much time of the present Congress, we failed to keep pace with the bill here referred to by the *Army and Navy Journal* of February 5th. It says:

"During the debate on the amendment to the legislative, executive and judicial act, creating the office of dental pathologist at the Medical Museum, the incumbent to receive a salary of \$1,800 per year, as recommended by Surgeon-General Sternberg, Senator Chandler said:

"Mr. President: There is another thing. Our soldiers and sailors are exposed to the

cold winds of heaven when they are engaged in the performance of their duties, and unless their teeth are sound and well preserved, they will have facial neuralgia and rheumatism, and be unfitted to perform their duties. There is no part of the body that is more sensitive than the teeth, and here is a proposition that the surgeon-general of the army shall be enabled to make proper provision for this care of our soldiers and indirectly our sailors. I hope there will be no objection to it. I can understand how a proposition of this kind might be rejected in a body of young men who have not begun to feel the ailments which come from imperfect teeth, but a body composed of as old men as we are, nearly all of us beginning to feel the difficulties and troubles to our teeth that come as we get on in years, ought unanimously to vote that the teeth and jaws of our soldiers and sailors should be preserved and perpetuated for such use as they have to make of them. They do not use them as we do here, but they use them efficiently in the public service, and they ought to be cared for judiciously and liberally."

The distinguished source of such an opinion greatly encourages us to expect favorable legislation on the admission of dentists into the army and navy.

As we observed in a recent issue of the WEEKLY, the time has arrived to press this matter before the present Congress.

J. A. C.

Our Policy.

THE WEEKLY is here to stay. This has been made possible by generous responses to our subscription list and enthusiastic commendation from leading men from Maine to California. This statement has a Fourth of July flavor and coloring, but it states a living truth, nevertheless. With such encouragement, it is the purpose of the managers to enlarge, at an early date, the size of the journal, and to add a corps of force-

ful and spicy writers from different parts of the country.

The literature and mechanics of the profession are growing so rapidly they demand a rapid medium for promulgation. We are not competing with the monthly journals, though judging from the meager recognition from some of them, this belief may be generally entertained.

To keep thoroughly in touch with dental affairs, the busy dentist has not time nor inclination to wade through the heterogeneous mass of current literature, and it is the mission of THE WEEKLY to boil this down and serve it in condensed shape, to be digested with the "walnuts and the cheese."

It is the policy of this journal to be independent in all things.

We are not the organ, nor do we seek to be, of any society, clique, college or section.

The proceedings of dental societies will not be published as a whole, but only so much of them as, in our judgment, will prove of general interest.

However desirable it may be to make a display of paid advertisements, it is the settled policy of the management to admit only such as possess genuine merit and which we can endorse.

With this brief outline of our purposes and aim, we confidently believe we will be handsomely sustained by an appreciative constituency.

You can do this in one of two ways, or both—i. e., by sending us a short article, descriptive of some new method of doing a thing, and remitting us a subscription for at least six months.

Will you do this? We believe you will!

J. A. C.

Explanatory.

Should this issue of THE WEEKLY fail to measure up to its usual excellence, the fault is to be found in the fact that our Editor-in-Chief, Dr. Catching, has been quite ill for several days, but gives promise of an early recovery.

Effect of Tea Cigarettes.

This is the narcotic age, surely, and an unrelenting war should be waged against it in all of its insidious forms.

The *Quarterly Journal of Inebriety* calls attention to the tea cigarettes as one of the most injurious and dangerous of the new fashions.

Tea cigarettes are made of a grade of green tea which has but little dust, and is composed of unbroken leaf. This is dampened to make the leaves pliable and capable of being stuffed in the paper cylinder, while the dampness is not sufficient to stain the paper. The cigarettes are laid aside for a few days and are then ready to be smoked.

The feeling of a tea cigarette in the mouth is peculiar. The taste is not so disagreeable as might be supposed, but the effect on the tyro is a sense of thickening of the head and a disposition to take hold of something or sit down. If the beginner stops then, he will not try tea cigarettes again. If, however, the smoker sits down and tries a second cigarette, inhaling it deeply, then the thickening feeling passes and is succeeded by one of intense exhilaration. This stage lasts as long as the smoke continues.

The agony of the opium fiend is a shadow to that of the nauseated victim of the tea cigarette. Food cannot be looked at for hours, yet the first step towards a cure is a cup of tea. An hour afterward comes the craving for a cigarette.

Two Legal Decisions.

When judges of the law render decisions contrary to the dictates of common sense, reflections upon the verdicts of petty juries must cease. The *British Journal of Dental Science* calls attention to two remarkable opinions as affecting the liability of parents or guardians for dental services, and which

declare that dentistry is *not* a necessity in the eyes of the law. The *Journal* says:

"Two cases which have recently come before our notice make us arrive at the conclusion that the services of our profession are not considered a necessity by the legal mind, at least not in all cases. An action at law was tried before the Supreme Court of New York, in which it was decided that filling and regulating the teeth of a minor was not a necessity and that the parent need not be liable. In the case of extraction for the relief of pain, however, the dentist became a necessity and his fee would require to be paid. The other case relates to artificial teeth. Judge Wynne Foulkes heard an action the other day by an Atherton dentist for money due in respect of an artificial set of teeth supplied to a minor, and held that "the contract could not be enforced under the act, artificial teeth not being a necessity." Common sense would have decided that as nature considered teeth a necessity, their substitution after loss would come under the same heading. But common sense and law are frequently at variance. It therefore behooves dentists who perform operations for minors to assure themselves of the consent of the parents and guardians of their young patients."

One-legged and cross-eyed minors, according to these Solomons of the law, are left to their own fate, to press the question to its fullest analysis.

J. A. C.

Dr. Evans's Will.

The late Dr. Evans, of Paris, has, as stated in the *Journal für Zahnheilkunde*, willed his snug fortune to the city of Philadelphia under peculiar conditions. The city is to build an Evans Museum, in which all his orders and garments are to be exhibited. Further, a monument is to be erected on a public place which is not to cost more than half a million.

F. A. B.

Go to the Meeting!

We wish again to remind you of the meeting at St. Augustine, and to urge your attendance.

This meeting will mark a new era in Southern dentistry. While it is humiliating to make the admission, it is a painful fact, that as a section we have contributed but little to the literature and science of the profession. This is not from a lack of ability, but rather the result of indifference and a disposition to drift with the current. Stop drifting and stem the current! Strike out with the bold, but dogged determination, to "make a spoon or spoil a horn!"

Don't wait for something to turn up, but turn up something! The world's horizon is not described by the four walls of your office.

"He who lives to himself, dies to himself, and dying, the world curses him."

Go to the meeting, not as a favor to any one individual; but because you owe it to yourself, your profession, and your posterity; and should you fail to bring an idea, you might, if on the alert, secure one.

We know that some of you will have a crown to make for Mayor Blowhard, and a bridge for Mrs. General Talkwell, and an irregularity to look after for Miss High-kicker, but we'll forgive and overlook this little idiosyncrasy in your make-up, if you will go, and say nothing about it.

In all seriousness, let us urge you to go!

J. A. C.

Open Letter.

Editor American Dental Weekly:

As the "open letter to Dr. B. Holly Smith," published in the November issue (1897) of the *International Dental Journal*, has created some comment and strained criticism through some journals and prompted considerable correspondence of inquiry, I will, with your permission, address this as an "open letter" to those interested in

the subject (favorable or unfavorable), to the "open letter to Dr. Smith") and request silence and suspension of further inquiry by letter on the subject until the meeting of the Southern Dental Association at St. Augustine, at which time the subject will be fully explained and discussed if desired.

Nothing but true interest in behalf of the profession prompted the writing and publishing of the open letter to Dr. B. Holly Smith, as must and will be realized and acknowledged whenever the subject has been justly and dispassionately investigated and viewed from an equitable standpoint.

Faternally,

B. F. ARRINGTON.

Goldsboro, N. C.

To Remove Live Pulp.

In removing hypertrophied or even live healthy pulps, Dr. Goble says: First dry the exposed pulp and place on it a crystal of phenic acid; it is highly deliquescent, and will extract moisture from the pulp tissue and sear it; with a fine needle inject cocain solution, and remove the pulp. There is no pain whatever, in the operation, if the work is done rapidly.

Vaseline in the Laboratory.

Vaseline is a good thing in a dental office. It may be used in impressions in place of varnish. It is good to use to prevent sticking of flasks, and it may be used to fill in where you forgot to put wax, or where the plaster has not run up sufficiently to admit easy drawing, says A. N. Coates in *Ohio Dental Journal*.

Tough Plaster Casts.

Plaster casts may be made so tough that they will bear the driving of a nail into them without cracking by immersing them in a hot solution of glue for a sufficient time to permit it to permeate the entire mass — *Scientific American*.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., FEBRUARY 17, 1898.

NO. 23.

FROM DOCTOR FLAGG.

To the American Dental Weekly:

MESSRS. EDITORS:—With your kindly mention of my name in your February 3d issue, p. 261, I would say that my dissatisfaction with the chapter on plastics was *not* because I was not given proper credit, for had I been *everything* that is *correct* would have had to have been credited to my book on "Plastics," but I was displeased at finding myself misquoted and misrepresented, and accredited, specifically, with views which I never advanced. I wrote the author that he would never have done this had he not been writing upon a subject regarding which he had *no practical knowledge*. The whole chapter is merely a "Comedy of Errors."

In order that I may contribute something of general as well as of special interest, I send you the analyses of the two *alloys* of which I spoke at the recent "Swarming of the Hornets."

The analyses as made by myself and (for verification) by the analytical chemists, Messrs. Booth, Garrett & Blair, Philadelphia, are:

Fox & Gerhardt's—said to be following "Dr. Black's"—found in a 27-page article in *Cosmos* of December, 1896, p. 991, and which is nothing more than an old "New Departure" formula, which was abandoned twelve years before; but this is very unlike it, being:

Silver.....	68.00
Tin	28.86
Gold.....	2.88
A little zinc and iron—"probably as impurities."	

You will see that it makes a very good "contour" alloy, had it been properly cut, magnetized and prepared, as usual, by "heat ageing." As prepared it "smuts" profusely if washed, but mixes well if mortar mixed.

For the "only perfect alloy," called the "Fellowship," it is one of the very numerous results of "much hard work," which however always proves so amply compensating, as it *invariably* produces the "*best*"!

This alloy made into amalgam has been used by Dr. Crouse "for several months (only think of it!) in his own practice, with entire satisfaction"—therefore—he guarantees it. I would say, incidentally, that each lot of this alloy is "tested with the micrometer and dynamometer," and as, at this late date in amalgam alloy work, these two instruments are *practically useless*, as we have been thoroughly informed upon shrinkage and expansion for almost twenty years, and as there is no alloy sold which does not make an amalgam sufficiently hard for all service required, it is *important* and very gratifying that this is done.

The formula, as given by two analyses, is:

Silver	67.73
Tin	26.88
Copper.....	4.71
Zinc.....	1.23
Gold.....	none
Antimony.....	none

This kind of alloy is what is known in New Departure Corps work as a "bastard" alloy, as it is a mingling of metals which have been for many years regarded as *antagonistic*, but which have repeatedly and sometimes for long periods—one or more years—*seemed to promise well*, but which have eventually shown their "cloven foot."

This "Fellowship" alloy, it will be recognized, would make an excellent "sub-marine" with its 68 silver, 27 tin, and 5 copper, but its value for this work is in degree interfered with by its ill-advised addition of zinc.

"Sub-marine" amalgam saves its poorly structured, soft teeth just *in proportion* as it sulphides *promptly*, and *thus* by the darkening of its surface and the incorporative darkening of the surrounding tooth structure making two absolute "compatibles" to rest the one in apposition with the other.

Yours, with kind regards,

J. FOSTER FLAGG.

SYPHILIS.

In writing on this loathesome disease before the Minn. State Society, Dr. Frank R. Wright gives some very interesting information:

It is hard to believe that one person out of every fourteen in the United States either has or has had syphilis. Still it is true, 70,000,000 population and over 5,000,000 syphilitic. Now, in the country a case of syphilis is a rarity, even to a physician. If the disease is rare in the country, it leaves nearly the whole of the 5,000,000 cases to be distributed among the cities and larger towns. This leaves a proposition like this: One in fourteen in the country, as a whole, and nearly 5,000,000 cases to be distributed in the cities and towns. What is the proportion in the cities and towns? If the proportion in the cities is one to fourteen, or one to twelve, as the case may be, what proportion of these visit

the dentist in the course of a year? How many of those who do inform him of their condition? The majority of people visit their dentist more or less regularly, so that the majority of these patients, sooner or later, come under the care of some dentist. But very few of them ever tell him of their condition.

What is the dentist to do? Every case that comes under his care is a source of danger, not only to himself, but to his other patients in whose mouths he may use his instruments. You cannot refuse to accept as patients all persons who come to you with a congested pharynx, or suspicious spots in their mouths. These patients have the same right to the service of a dentist that they have to those of a physician. For a member of a profession like either medicine or dentistry to refuse to care for one of these unfortunate ones is to brand himself as ignorant and cowardly, and a man unfit to practice the profession he has chosen.

With this patient before you, three things must be considered. First, the patient; second, other patients who may come to the office; third, the protection of the operator.

First. These patients are entitled to the same consideration that other patients receive at your hands.

Second. Other patients who are treated in the office must be protected. This can be done in only one way—cleanliness. By cleanliness I do not mean the simple washing of the instrument used, but surgical cleanliness. Every instrument that has been used should be sterilized either by boiling or by being placed in strong carbolic acid for some time. Under no circumstances should an instrument or napkin that has been used in the mouth of one patient be used in treating that of another without being sterilized.

Third. The operator must protect himself against accidentally wounding his hands with the instrument he is using, and against inoculating any abrasion that may be on

them, with the secretion of any sore that may be in the mouth of the patient. It must be remembered, also, that where there are specific sores in the mouth, the saliva will be contaminated and infection may take place from contact with it.—*Dental Review*.

LIQUEFIED AIR.

The economical liquefaction of air in large quantities has been recently accomplished by Mr. Chas. E. Tripler, of New York, after several years of experimental work. Two and a half gallons of the liquid were recently sent from his laboratory to Prof. Barker, of the University of Pennsylvania, and its properties were exhibited in an extremely interesting series of experiments during a lecture delivered by Prof. Barker to his class and a company of invited guests. This was the first public exhibition of the kind of this article in the United States.

Mr. Tripler's method of liquefaction is based upon the fact that, if a gas be compressed and allowed suddenly to expand, it absorbs the heat of the surrounding medium, thereby producing intense cold. He compresses air to 2,000 pounds to the square inch, passes it through a coil and permits it to issue from a needle point orifice. There it expands and cools. This cold stream of air circulates around a second coil through which compressed air is flowing, reducing the temperature of the latter. The air issuing from this second coil has its temperature lowered to a point due to its own expansion plus the cold imparted from the first expansion. The expanded and extremely cold air from the second coil is used similarly to cool a third coil, the air in which is brought down to a temperature of 311.8° F. and below, at which it condenses and flows from the end of the coil in a liquid stream.

In the course of his lecture Prof. Barker made a number of curious experiments

with the liquid, illustrating the operation of the laws governing the formation of solids, liquids and gases. When it was poured into a tumbler it boiled until it had absorbed the heat of the glass. The cold gas given off condensed the moisture in the air above the glass, which fell in the form of hoar frost. A piece of tin thrust into the liquid made it boil and the tin was rendered as brittle as glass. Copper and platinum were not so affected, and it is evident that these metals will make suitable receptacles for this new liquid. When it was boiled over a furnace the ebullition was, of course, excessive; but the moment water was poured into the boiling liquid, the former was instantly frozen. Alcohol and mercury were frozen when brought in contact with the new product. The liquefaction point of the two constituents of air is different, that of oxygen for given pressures being several degrees higher than that of nitrogen. Hence, as the temperature of the liquid rises, the nitrogen is the first to escape as a gas. The remaining liquid is proportionately rich in oxygen—a fact which is proved by the bluish tint which a standing vessel of the liquid assumes if exposed to the air. Just what the economic value of this new and extremely interesting product is time will show; but in experimental work in the laboratory it will be certain to find a ready field of usefulness.

Scientific American.

Repairing Vulcanite Plate.

The following process for this work is sent by Dr. W. H. Bailey, Chippewa Falls, Wis. :

For repairing vulcanite plates, bevel the broken edges with file or scraper, then with a clean iron spatula heated, the new rubber can be spread on the beveled edge nearly as easily as we spread wax. The new rubber adheres firmly to the old and much time is saved in getting the case into the vulcanizer.

CANADIAN LETTER.

Editor American Dental Weekly:

Thank you very much for your invitation to the meeting of the Southern Dental Association. It will be impossible for me to attend, but the warmth of your invitation smacks of typical Southern hospitality of "fore de wah." I suppose you Southerners have such an opinion of Canadian weather that it would be useless to invite you to our Ontario Dental Society meeting March 3d and 4th. The date of our meeting was decided in July last in order to correspond with the 30th anniversary of the incorporation of the dental profession in the province of Ontario. An effort will be made to get together as many as possible of the "old timers," as those who were in practice previous to 1868 are called. Dr. G. V. Black, of Chicago, will, it is expected, be present and talk on "Amalgam."

At the January meeting of the Toronto Dental Society, Dr. F. J. Capon read a paper on "Implantation, Reimplantation and Transplantation." Many interesting cases in practice were cited by Dr. Capon and others. One case came under the notice of Dr. Capon where a boy had several lower incisors removed by a kick from a horse. The boy's mother picked up the teeth from among the straw and immediately replaced them, so hastily that one tooth was placed with its lingual aspect facing out. All the teeth became firm and have been so for several years, the only noticeable feature being the tooth placed wrong side out."

On January 25th the annual dinner of the Toronto Dental Society took place at Webb's. Almost fifty dentists were present and a most enjoyable evening was spent. The following toasts were proposed and responded to: "The Queen," "The Toronto Dental Society," "The Dental Profession," "The Dominion Dental Journal," "The Undergraduates." The Toronto Dental Society

will have a special evening with Dr. G. V. Black on the occasion of his visit to Toronto in March.

As the spring approaches the most talked of portion of Canada is that most inaccessible part known as the Klondyke. Several parties are preparing to start from Toronto, among them a Toronto dentist who proposes to dig his own gold. I heard of an enterprising Canadian dentist the other day who had pushed his way to the Yukon district and was extracting teeth at eight dollars per tooth. Sounds like "pulling their legs" doesn't it? No need to wash gold out of the sand in his case

Dr. J. W. Oakley has sold his Toronto practice and gone to Ontario, California, to grow oranges and regain his health.

A sleek looking young man with a plausible story about being the brother of the president of the Manitoba Dental Society and a dental student, succeeded in borrowing a dollar from a large number of Ontario dentists. He said he expressed his money and watch to Toronto to his sister and found her away on his arrival so that he was penniless in a strange land. "The day after to-morrow" has not yet arrived in so far as his promise to pay goes.

CANUCK.

Toronto, Feb. 1, 1898.

For Cement Fillings.

To insure a smooth, hard cement filling, in proximal surfaces, particularly where the labial and lingual walls are to be restored, pass a thin piece of mica or celluloid matrix, first having been slightly oiled, between the teeth, and after introducing the cement into the cavity, press the mica or celluloid matrix firmly over the cavity and hold in this position for a few moments.

The pressure makes a more solid filling. The oil prevents the cement sticking to the matrix, and the matrix gives the proper space between the teeth.

J. A. C.

Schedule of Prices for Dentists in Switzerland.

The Dental profession of Switzerland enjoys a law which is as unique as valuable. It regulates the minimum and maximum charges of any kind of work done in a dentist's office.

The Schweizerische Vierteljahresschrift reported those charges in force in the canton of Zurich, some of the most interesting of which are given below:

Examination of mouth and teeth, 40 cents to \$2.00.

Cleaning of teeth, one sitting, 40 cents to \$2.00.

Extraction of one tooth or root, 20 cents to \$2.00.

Extraction of several teeth or roots, per piece, 20 cents to \$1.00.

Extraction of one or more teeth with anesthetic, \$1.00 to \$10.00.

Local anesthetic during operation on tooth, 60 cents to \$1.00.

Capping of pulp or cauterizing, or extraction of same, 40 cents to \$1.00.

Every antiseptic treatment, 20 cents to \$1.00.

Treatment of sensitive dentine during one sitting, 20 cents to 60 cents.

Any of above operations done at home of patient 60 cents to \$2.00 more.

Done at night \$1.00 to \$3.00 more.

Filling of cavity with any plastic material, \$1.00 to \$3.00.

With gold, \$3.00 to \$6.00.

Contour gold fillings, \$6.00 to \$13.00.

With tin, \$2.00 to \$4.00.

Rubber Denture, \$4.00 to \$6.00.

Every tooth on same, \$1.60 to \$4.00.

Gum teeth 60 cents to \$1.20 additional.

Denture made of gold, \$6.00 to \$10.00.

Every tooth on same, \$4.00 to \$6.00 additional.

Gold crown, \$5.00 to \$20.00.

Bridge-work, every tooth, \$6.00 to \$12.00.

Value of gold charged extra.

Bandaging of jaws by fractures, \$1.00 to \$10.00.

Splint for fracture, \$6.00 to \$20.00.

The prices of obturators, regulating and other mechanical apparatuses are settled on by mutual agreement.

F. A. BROSIUS.

Uniformity in the Laws.

Reciprocity between the different State boards is so generally endorsed and desired, it is only a question of time when this will prevail. In a bill to be introduced in the Maryland legislature, this clause appears: "Graduates in dentistry, who have secured by examination certificates from other State boards, need pass no further examination in Maryland."

And in New Jersey a new dental bill has been drafted with a similar clause, and it is safe to predict that the "Hornets" will carry it through.

Now, let all the States fall into line with this amendment to their present law, and thus bring about a uniformity and harmony which are so much desired. J. A. C.

First Female Dentist.

Miss Lucy B. Hobbs-Taylor, of New York, has the distinguished honor of receiving the first dental diploma, having graduated from the Ohio Dental College in 1866. In the dental profession there are only about three hundred women graduates in practice.

Simpson, the discoverer of chloroform anesthesia, had an humble beginning, as is usual with great men. He was the son of a baker. (How the letter n in that word would have revealed his life it is not difficult to say.) At college his expenditures did not amount to more than \$50 a year. Soon after graduating he filled the chair of obstetrics in the University of Edinburgh.

The Very Latest Method of Filling Teeth.

MEMPHIS, Feb. 8, 1898.

A young lawyer of Walnut Ridge, Ark., had five small approximal cavities in the upper incisors.

A man, sixty years old, claiming to be a dentist and registered under the laws of Arkansas, made flat separations between the teeth with a file, and without removing decay from the cavities made and cemented on four open-faced gold crowns.

On being remonstrated with for such a vulgar display of gold, he claimed *that* as the best and *very latest method* of treating such conditions.

The crowns were driven on so tightly between the teeth as to set up inflammation and force them out of line. Of course they were removed and the cavities filled with gold. But the disfiguration caused by the flat separations remains, a souvenir or perpetual reminder of "Old Foxie" and his "newest method of filling teeth."

J. L. MEWBORN.

To remove the stains of artesian or mineral waters, fruits, berries, tobacco or tartar, which will accumulate on artificial teeth, use a stiff tooth-brush, soap and pumice once a day.

J. L. M.

FLORENCE, ITALY.

I have received THE AMERICAN DENTAL WEEKLY and think it fine.

The Italian authorities have started quite a crusade against American dentists. No one will be allowed to continue practice unless he has the M.D. obtained in Italy, and all who have settled here since 1888 will have to quit. This comes hard on many.

WM. DUNN.

Noel, of Nashville, is filling roots with thorius. Isn't this a case of thorn in the flesh? When will the perfect root-filling material be discovered?

Practical Hints.

In writing on the subject of painless dentistry, before the New York dental societies and published in the *Dental Cosmos*, Dr. L. S. Goble says: "Most of the excavators are thick and dull; they should be as sharp and thin as a new moon. He always takes his to the laboratory and makes them thin. One can readily see the advantage. A thin razor-like edge will slide under the decay and peel it out in layers, where the other spoon will only cause pressure and scrape the surface.

Jewelers' broaches are valuable instruments; they are as fine as a hair, and often almost as pliable. Remove the temper as follows: Place the broach in the flame of an alcohol lamp until red-hot; then, shielding the flame with one hand to protect it from drafts, raise the broach slowly until out of the flame and away from the heat, so letting it cool slowly. If it is heated and removed quickly from the heat it will be as hard as it was before.

The hypodermic needle can be used with advantage with nearly every patient. He uses the Tiemann. They cost forty cents each, wholesale; are not reinforced, but are so fine you can put them through the canal of an ordinary hypodermic needle. A thick, heavy needle jammed into the gum or pulp is very painful.

Aid in Taking Impressions.

To facilitate the taking of an impression where the teeth are slightly inclined to each other, cut a band from rubber tubing and slip over the teeth, the upper *inside* rim of band trimmed thin so as to produce a perpendicular position of the band.

In saucer-shaped buccal cavities of molars, the rubber band is also an excellent means of retaining an application of devitalizing fiber, and protects it from the action of saliva.

J. A. C.

For Toothache, Pain after Extraction, Etc.

Dr. Welch extols the following so highly and its uses are so varied and valuable, we present it for those who have not tried it :

Best alcohol	1 ounce.
Chloroform.....	2 ounces.
Sulph. ether.....	$\frac{1}{2}$ ounce.
Gum camphor.....	$\frac{1}{2}$ ounce.
Laudanum.....	$\frac{1}{2}$ ounce.
Oil of cloves.....	$\frac{1}{2}$ dram.

For toothache, plug the carious tooth with cotton saturated with this cordial. For after pain in extracting, press a good quantity of the saturated pledget well up in the socket, and allow it to remain for an hour or two. If there is fear of hemorrhage, place a little powdered tannin on the side of the pledget first entering the socket. You can also relieve the most stubborn toothache of pregnancy by first bathing the tooth and gums with cotton soaked with it, having the patient draw in the breath a few times, so as to pass the air over it. Change the saturated cotton once or twice, if necessary. It is sure to soothe the pain and the whole nervous system. For toothache in pregnancy, when suffering has been fearful and the prostration dangerous, he has always administered it with relief. Rubbed on the skin it is very penetrating and of frequent use in all painful swellings and bruises, if the skin is not abraded. In the dental office it makes the dentist master of the situation. He has studied, worried and experimented, and bought everything, in hopes of finding "the nectar distilled in the garden of the gods"; but never found it till he found this.

Gold Used Annually for Dental Purposes.

In the United States alone, it is a reasonable estimate to say that the amount of gold used annually for dental purposes amounts to one and a half million dollars.

Wood Canal Points.

The wood pulp canal points sold at dental depots I find to be better than anything else for root fillings. I keep them in a wide-mouth bottle with carbolic acid. After the pulp canal is dried and ready to fill, pump it full of chloro-percha then select a wooden point which fits the canal and carefully force it into canal, driving out surplus chlora-percha. After using the wood points I think few operators will again use gutta-percha points.

BANDS FOR REGULATING.

German silver wire rolled to required thickness makes better bands for regulating than the band material sold at depots, and the expense is very much less.

FILLING LABIAL CAVITIES.

To those who have not tried the felt or crystal gold in filling sensitive labial or buccal cavities, do so and you will be pleased with the result. But little undercut is needed and cavity can be filled quicker, better and easier for both patient and operator.

W. H. BAILEY.

Chippewa Falls, Wis.

George Edwin Hunt—Ida Grace Brooks.

Married, Thursday, February 3d, 1898.
So soon an editor, so soon a benedict.

My friend, may the devil never worry you, and may the honeymoon never cease and the humdrum life never begin. We are sure that with the *Grace* which you now possess your eternal happiness has begun.

An Absorbent.

In the absence of bibulous paper, spunk, or other absorbent material, get a new ink-blotting pad, break down the stiffness by rolling it roughly, and with the pliers pick off pieces the size of the cavity, and you have an absorbent almost equal to the manufactured variety.

J. A. C.

Taking Difficult Impressions.

Several years since Dr. E. Angle gave to the profession the following method for taking difficult impressions:

Impressions of the mouth for a full or partial denture should always be taken in plaster. Where difficulties arise, as they often do in partial cases, oil the impression cup before pouring the plaster, to facilitate the removal of the former from the latter; then divide the outer portion of the impression into three pieces, when the whole can be easily removed and replaced in the cup. After obtaining a good impression of an upper, which must include a part of the soft palate and condyles of the jaw; the portion of the plaster indicating the location of the hard palate—unless of a soft, spongy membrane or tissue over the hard palate—should be trimmed to relieve pressure at that point. Knock the impression out of the cup, trim off all surplus plaster before pouring the plaster for the model.

Incase the plaster impression, after its proper preparation, in a sheet of lead two and one-half inches wide and about 24-gauge; the object of this is obvious. The resulting model should be scraped to the depth of a line on that part representing the soft palate, then with proper articulation of the teeth, satisfaction for the patient and dentist usually ensues.

Lacking Journalistic Courtesy.

We are glad to see that the *Dental Cosmos* has noticed the advent of the *Indiana Dental Journal*, which very recently appeared. We were under the impression that the editor of the *Dental Cosmos* was not aware that there is such a thing as journalistic courtesy.

Dr. Chas. W. Meloney, of New York City, died Monday, February 7, after a brief illness of ten days. He was a quiet, unassuming man, and will be greatly missed by his associates.

Comparative Foods.

A quart of milk, three quarters of a pound of moderately fat beef—sirloin steak, for instance, and five ounces of wheat flour, all contain about the same amount of nutritive material; but we pay different prices for them, and they have different values for nutriment. The milk comes nearest to being a perfect food. It contains all of the different kinds of nutritive materials that the body needs. Bread made from the wheat flour will support life. It contains all the necessary ingredients for nourishment, but not in the proportion best adapted for ordinary use. A man might live on beef alone, but it would be a very one-sided and imperfect diet. But meat and bread together make the essentials of a healthful diet. Such are the facts of experience. The advancing science of later years explains them. This explanation takes into account, not simply quantities of meat and bread and milk and other materials which we eat, but also the nutritive ingredients or "nutrients" which they contain.—*N. Y. Med. Times.*

If you do not feel able to pay the Ponce de Leon hotel rates at St. Augustine, there are dozens of other good places at a much less price, where are served the finest fish, oysters, shrimp, crabs, etc., etc., oranges, grape-fruit, lemons, limes, bananas, pineapples, etc.

Your attention is called to the advertisement of the Southern Railway. It ramifies the whole country, and from any point will land you in St. Augustine, where the Southern Dental Association will meet February 22.

Some journals are still grinding out bits of society matter of a year's standing. It may be "original matter," but it is surely old enough to be stale.

America against the world, in dentistry.

THE
American Dental Weekly
 ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription \$2.00 per year; \$1.00 for six months—including Canada and Mexico: other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, February 17, 1898.

Dishonest Dentistry.

When dentistry is dishonest, and that is not rare, it is more dishonest than stealing. Would it not be better for both patient and dentist if the latter were to take surreptitiously from the patient's pocket three dollars than to make a hole in a tooth and fill it for that amount? Not long since we noticed five small fillings in the morsal surface of a molar, for which, no doubt, a liberal fee was collected for each, when one crucial filling would have been better, and would have cost one half of the five fillings. Was it honest? Wasn't the extra charge for extra fillings stealing? There is hardly another profession in which the patient is so completely at the mercy of the attendant.

We quote from Dr Burket in the *Western Dental Journal* as follows:

"The practice of crowning teeth is reaching such magnitude that it may well claim our serious attention. Scores of good teeth that might be made serviceable for years by

filling are ground down and crowned, till we "lift our hands in holy horror" at the dental offices becoming dental slaughter-houses. I know personally of a case in which a dentist insisted upon crowning four teeth, only two of which had cavities larger than a pinhead, and the cavities in those two were not bad ones. To fill them would have cost but a few dollars; to crown them, a number of dollars. Draw your own conclusions as to the dentist's motive. And this kind of work is going on all the time and all over the country. Shame upon the men who will sacrifice humanity for such a selfish motive! Having had the technical training that would enable them to do the right kind of work, they are willing to injure their patients and debase the profession for the sake of gain. Measured by the standard of ethics, they are found wanting. What do we practice dentistry for any way? Just for the money that is in it, or for the good of humanity? The fact that we must earn our living through our practice does not do away with that other and greater fact that dentistry, as a profession, owes its existence to humanity's needs. When an operator's highest thought in his work is the money he can get out of it, numberless evils edge their way into his practice, almost without his notice, and he begins to degenerate."

Bur Excavation.

Some one has said that if the bur is repeatedly dipped in oil of cloves while excavating the pain will be much lessened. Such things are often said and go unheeded because they are so simple, while many a time the simplest truths are the greatest truths. However, if there is any merit in the above, it is because of the lubrication of the bur, thereby lessening the friction which lessens the heat that constant burring causes.

The pain of excavating with a bur can

be lessened very much by lifting the bur every few revolutions, making a kind of lift and touch motion. This lessens the friction and causes an intermittent pain, if any at all, which is more easily borne than a continuous pain.

It is needless to say that sharp burs hurt less than dull ones, causing less friction and heat. Fine cut burs cut with less pain than coarse cut ones.

It is well to try these little expedients, as painful excavating is the bane of the dentist's office.

A Damage Suit.

The *New York Journal* says: "Miss Essie Abrams to-day obtained a verdict for \$10,000 in an action brought by her against Clarence Hackett, a dentist, for injuries to her jaw caused by his unskillful extraction of a tooth on July 21, 1894. Defendant was absent and an inquest was taken before Judge Beach and a jury to assess damages to be awarded to Miss Abrams, who claimed she had been injured to the extent of \$25,000.

"Miss Abrams said the dentist broke a portion of her jawbone. She suffered extreme pain for a week and then called in Dr. Davis S. Schlegel, who declared she was suffering from necrosis of the jaw. Dr. Schlegel and Dr. Erhardt took away an inch and a half of the diseased bone. She said that she had since been unable to earn anything, as the injury to her face prevented her from following her profession as an actress."

A Vulcanized Finish.

Some things are never old. Here is the way Dr. Steele makes a rubber-plate with a vulcanized finish:

A nice way of preparing plates to come from the flask clean and smooth, and ready for pumice and final polishing, is to be sure

and get a perfect, smooth cast. Make your model plate of paraffin and wax. After the teeth are mounted correctly, shape the gums and plate just as you would have it for the mouth; then after trying it in the mouth to make sure it is all right, place it back on the model and flask as usual. When the flask is opened, place both parts in boiling water, and with an atomizer tube go over all the joints and pins, thoroughly washing out all the wax. Take the flasks out of the boiling water, and immediately coat both the model and the lingual surface of the plate with a varnish made from pure liquid silice, to which has been added enough fine, pure powdered tin to make it give a good metallic coating. Then set the flasks in the air a few minutes till the varnish is set. Now lightly coat both varnish surface with soap to prevent the metal coating from adhering to the vulcanized plate. On opening your flask the plate will come out clean and smooth, requiring but little work to finish.

Memorialize Congress.

The Indiana Dental Association has requested the congressmen from that State to use their efforts to have provision made for dental surgeons in the army and navy.

It is time the dental profession was looking after this matter in earnest. The note in the last issue of *THE WEEKLY* lends hope for favorable action on the part of Congress. There should be, however, memorials sent up from each State association to the congressmen from their respective States. When the dental profession becomes earnest in its efforts to secure the passage of such a law by Congress, the members of that body will feel the impulse and move in the matter. The whole country should act this year.

The Royal College of Surgeons, of England, has eliminated the study of *materia medica* from its course. The Medical Council advises the same for the dental schools.

Hardening Steel.

Metallurgists now think they know why a piece of red-hot tool steel becomes flint hard when suddenly cooled in water. For years they have been satisfied with the explanation that the shock drove the molecules of the steel into closer contact, hence the hardness, but this theory was completely destroyed by the fact that the volume of the hardened steel was greater than that of the unhardened material. After five years' search the metallurgical department of the Sheffield Technical School has solved substantially this difficult problem. It had been necessary to employ very intricate physical apparatus, the object of which was to measure accurately what seemed a paradox, namely, how much hotter a piece of steel becomes on cooling, and how much cooler it becomes on heating. These phenomena were due to the formation or dissociation of compounds within the steel itself. The result of the researches showed, almost beyond doubt, that the almost diamond hardness of suddenly cooled steel was due to the presence of a remarkable sub-carbid of iron, and that the action of tempering was due to the fact that far below red heat this compound decomposed and diluted the mass with soft iron. The permanent magnetism of steel depended on the amount present of this compound.

Dr. Leffman says: Steel gets larger when hardened. A steel rod that will pass easily in a ring when soft will not pass when hardened. There are several theories concerning tempering. I do not know what is the present theory among engineers. One is that the hardening causes the carbon to remain in the iron. There is no chance for the carbon, in solution, to escape. It is in the molecules of the iron, and is forced to remain. There is no perfectly demonstrated theory, however, as to the hardening of steel. There has been one suggestion, that the carbon remains because the steel is

chilled so quickly that it does not have a chance to escape. By chilling it quickly it is actually forced to remain in its place.—*Exchange.*

Securing Immediate Suction in Dentures.

The plate is moistened, and then simply sprinkled with fine powder of gum tragacanth. The plate is then pressed in place, and no matter how good or bad a fit, it will hold firmly for a day under almost any use or abuse. The advantage of this will be apparent to any one; for the first half-hour or few minutes after a plate is put in for the first time makes or mars the reputation of the dentist, for the time being, in the estimation of the inexperienced patient, whose efforts to "suck up" a plate, if not immediately successful, are at once discontinued, the plate is taken out, and the invariable remark is, "It don't fit."

A patient will bring a rickety, ill-fitting plate, and after being without it the few hours necessary to repair it, will insist that the plate fitted perfectly before it was confidently submitted to our care, but now it feels as though it had been made for another party. A thin coating of tragacanth will even up all irregularities, soothe the wounded sensibilities of the patient, and prevent the plate's wounding the sensitive membrane of the mouth.

Tempering Swiss Broaches.

The proper temperature when elasticity is desired is stated to be 530 to 570° F. The difficulty is in producing the required degree of heat. The boiling point of glycerin is given as 554° F. Here we have a solution of the problem. Place the broaches in a test tube or small vial, pour in the glycerin and bring to the boiling point and keep it there a few minutes. Place the tube or vial on a non-conductor to cool slowly.

JOHN G. HARPER.

St. Louis, Mo.

Pyorrhea Alveolaris.

In discussing this subject before the Southern Dental Association, Dr. C. N. Pierce said:

"We too often make the mistake of taking the symptoms for the disease. Pus is simply an expression of pyorrhea.

"By pyorrhea alveolaris we mean 'pus in the socket.' It is a conspicuous symptom and we seek to eliminate that condition.

"Five years ago, I noticed in connection with this condition of pus in the sockets other systemic conditions, and by continued observation I found that in four-fifths of the cases I also had some expressions of a gouty condition of the uric acid diathesis. I took the accumulation from the roots of the teeth to Professor Congdon, and asked him to analyze them carefully. He reported that they consisted largely of urate of soda, urate of lime and uric acid crystals. I said to the patient, I would suggest that you begin systemic treatment for the uric acid diathesis; place yourself on a diet as though for a case of gout. I also prescribed lithia and hot water. You cannot imagine my joy when I found the gums healing up at once with no local treatment.

"Treating the patients for gout cured the pyorrhea, but pyorrhea does not stay cured. You can arrest the progress of the disease, stop the accumulations of pus; but let your patient indulge in elaborate dinners and suppers, eat heartily of meat and drink wines, and he must suffer for it."—*Extract Dental Cosmos.* J.

A bill has been introduced into the Michigan legislature providing for the castration of all inmates of the Home of the Feeble-Minded and Epileptic before their discharge; of all persons convicted of felony for the third time, and of those convicted of rape.—*Atlantic Medical Weekly.*

Physicians are said to average only \$1,500 in New York.

To Make Induction Fluid.

A man came through the country the other day selling amalgam and a new thing for facilitating the mixing of amalgam, called "Induction fluid."

By dropping the required quantity of mercury on the amalgam and then a few drops of "induction fluid," the amalgamation would take place immediately without any kneading of the mass at all.

The "induction fluid" is made by taking five parts of water to one of C. P. sulph. acid. It is certainly a time-saver, but the mass should be washed thoroughly in clean water before inserting the filling to remove the traces of acid.

H. H. J.

Babbitt Metal—To Make.

Babbitt metal is so valuable in the laboratory, and cannot always be obtained suitable for dental purposes. We quote Dr. Haskell's formula for making it:

Copper, one part; antimony, two parts; tin, eight parts. Remember to melt in the order named, otherwise the tin will oxidize badly.

Pure lead cannot be used for the counter-die, because it melts at a higher temperature than the die. Reduce the melting temperature by adding tin. Make it five parts lead and one part tin.

A Bequest by M. Magitot.

M. Magitot has bequeathed to the Academy of Medicine an annuity of £23 to found a Magitot prize for the best work on stomatology, which is to be given every two years. Also, his personal library. He has thus ignored at his death the dentists of France, whom he would never recognize as colleagues during his lifetime—*British Journal Dental Science.*

Dr. W. Geo. Beers writes to say that he has not given up the active practice of dentistry. There was something else on the card, but if you have seen his writing you will know why we cannot print it.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., FEBRUARY 24, 1898.

NO. 24.

SYNCOPE, NECROSIS, ROOT-FILLING.

To prevent fainting Dr. E. B. Owen, as appears in the *Dental Digest*, gives thirty-five drops of the aromatic spirits of ammonia just prior to performing an operation which might produce syncope, as in extracting teeth. The object is to stimulate the heart, and he finds this usually very efficacious and a precaution which it is well to take with patients who are subject to fainting.

The idea is a good one and no doubt is good practice. All of us have patients who topple over in the office at times, particularly when teeth are to be extracted, when a precaution like this would avert the incident. Any cardiac stimulant would have the same effect, though Dr. Owen only mentions the one.

While on this line I will say, syncope, being the result of failure of the heart to force the blood to the head, the first thing to do is to place the patient in a horizontal position and keep him thus until he recovers. Of course stimulants should be given to accelerate the heart's action. On more than one occasion I have seen them fall to the floor in my office, and sometimes from the most trivial causes; even from the sight of my operating on another patient. It is my practice in such cases to fix them as comfortably as possible and leave them on the floor until consciousness has been restored. It would be even better if possible to have the head inclining a lit-

tle downward, which would facilitate the flow of the blood to the head.

In the discussion of incidents of office practice in the same journal, Dr. B. G. Maercklein says he treats necrosis of the jaws with a fifty per cent. solution of ordinary sulphuric acid, injecting it into the carious pocket until the tissue is wholly saturated; he forces the syringe until the parts are distended, and holds the fluid within the pocket for the space of a quarter of a minute, when he allows it to discharge itself. He prepares beforehand a solution of bicarbonate of soda to neutralize the acid as it enters the mouth. By this treatment he dissolves the necrosed bone where it can be washed away and discharged without any drilling or cutting. The doctor claims for this treatment that for ordinary cases, if thoroughly done, one sitting will be sufficient. This strength of acid is not at all dangerous, as it does not affect the healthy bone, but its action ceases at the line of demarcation between the living and dead tissues.

Again in the same journal Dr. J. W. Beetham, speaking of treating teeth for country people, not "Georgia crackers" however, says: (Patient suffering from an exposed pulp and came from a distance) "Apply rubber dam, wash out the cavity with warm water, then with pyrozone, next remove all débris and insert a small pellet of cotton saturated with carbolic acid, working it well against the exposed surface. Then take about ten minims of a four per cent. warm solution of cocain in the syringe

—tell the patient it will be painful for a short time only (Wonder if that assurance carries conviction?—ED.), remove the cotton, apply soft rubber plug, pass needle through and well into pulp, discharge some of the contents and leave the needle for a short time. After two or three minutes the whole pulp can be removed painlessly with a spiral barbed broach. Wash the chamber well with pyrozone, repeating until it ceases to effervesce; flush with 95 per cent. alcohol and dry thoroughly. Do not depend entirely upon warm air for drying, but use copper wire heated in flame of lamp also. Wipe out canal with fine broach, wrap with shred of cotton dipped in eucalyptus oil, pump in chloropercha, insert gutta-percha point and fill cavity permanently as desired. The pyrozone breaks up the blood and washes it out, also penetrates the dental tubuli. The oil following, being a solvent for gutta-percha, penetrates the cement, and being followed by the chloropercha, must seal the pulp chamber permanently.

In cases of severe hemorrhage keep floating with 95 per cent. alcohol until it ceases.

Now the doctor's method of immediate extirpation of the pulp and root-filling is very good, but it cannot be said with any degree of certainty that the pulp can at all times be removed by the use of cocain without any pain. Of course if it is injected into the pulp tissue it will have that effect but the insertion of the needle into the pulp would be equal to the insertion of a Donaldson broach; that is in a single-rooted tooth.

In my practice I have met with varying success in the use of cocain for this purpose. I have found that the crystals permitted to dissolve on the surface of a newly exposed pulp, would nearly always produce complete anesthesia of the entire pulp, but where there was congestion or an exposure of long standing, it would have no effect whatever.

As to injecting the medicine into the pulp I always expect pain when the needle is inserted, and in this am not disappointed. Yet there are times when such practice seems to be justified. It seems, however, that in this class of cases cataphoresis is destined to fill a long-felt want in the dental profession. A.

METHOD OF HERMETICALLY SEALING APICAL FORAMEN OF ROOT.

This old subject comes up for discussion on all occasions. A has his cotton method, B his cement, and C his gutta-percha. It is very rare to hear a new idea advanced on filling root-canals, but Dr. H. D. Boyd, in an article in *Items of Interest*, advances an idea we don't remember to have heard before. He fills roots with aristol and creosote.

After preparing the root in the usual manner, he proceeds as follows:

Place a sufficient quantity of aristol—from three to five grains—on cement slab. Dip spatula into pure wood creosote, and mix creosote and aristol as you would cement. That makes a very sticky mass, which can be made into any desired consistency by employment of more or less aristol as desired. After getting the mass as stiff as possible, clean spatula and put fresh quantity of aristol on clean portion of slab. Drop the mass into this and by moving spatula backward and forward with gentle pressure roll into a cone of the right size for the canal in question. By this means you can make in one minute's time a cone of the same consistency as a gutta-percha point, and as small as a hair if required.

"When the cone is prepared, take a pair of pliers (I find the style sold as "college pliers" will reach into canals best), and take up the cone by the larger end and push into canal. There is no difficulty to get a

cone prepared in this manner clear to the apex, and the little excess of creosote which is necessarily left there will keep any of it from passing. When you have the apex of the cone at the apical end of the canal, take a straight canal instrument and press on its base. This forces the mass up into the canal, after which cement or gutta-percha may be inserted according to preference of operator, and who can deny that the canal is "hermetically and antiseptically filled?" If any difficulty is experienced in sliding the cone to place, dip it in dry aristol and try again, when it will go right up."

Dr. Boyd says that though the cones made in this way are flexible at first they soon become as hard as crystal. We believe there are good ideas involved in this method which should receive a fair trial. Like Dr. Boyd we are always ready to enter our protest against cotton as a root-filling. The idea of putting a vegetable fiber into a root-canal as a permanent aseptic stopping is the most absurd thing that a scientific mind ever advocated. If the apical foramen happens to be so small that no moisture can ever infiltrate from that direction and the filling in the crown of the tooth never leaks, cotton is just as good as anything; in fact, it would not make the least difference whether the canal is filled or not, both ends being perfectly closed. Let moisture reach the cotton from either direction and there will be trouble, and a heap of it.

H. H. J.

Treating Mouth Mirror.

Immerse the new mirror in melted paraffin for a minute, which will run well at the back of the glass and prevent moisture from getting there.

WM. DUNN.

Florence, Italy.

THE AMERICAN DENTAL WEEKLY is highly appreciated by every dentist whom I have heard speak of it.

Attalla, Ala.

N. N. VANN.

GELATINE AS A HEMOSTATIC IN DENTISTRY.

Here is another remedy for hemorrhage, which bids fair to be used with great advantage. Dr. Frey, professor of the Dental School at Paris, writes in *l'Odontologie* as follows:

"There are two kinds of blood-stopping remedies: Those which contract the vessels and the coagulants. The former show many disadvantages: their toxic properties; the possibility of the recurrence of the hemorrhage if the contracted vessel goes back to its normal circumference at the place where the clot has formed; their favoring infection, because it has been proven that the body is more protected against infection when the blood-vessels are dilated. They favor diffusion and diapedesis in that state more than when contracted. The application of those remedies which contract the vessels, as ergotin, pyoctanin, etc., has to be limited to such cases where local means fails to do any good; these instances are but rare in dentistry.

The coagulants on the other hand only further the normal process of hemostasia to an excess, because the clotting of the blood externally to the vessels stops up the wound in the vessel in an injudicious manner.

These remedies must be entirely harmless to the tissues they come in contact with, so that the clot can organize itself. The chlorid of iron, which has been in use mostly, does not possess this property; on the contrary it injures the tissue to a great extent.

There are only two remedies among the coagulants which are little injurious, but form a firm and adhesive and easily organizable clot: 1. The calcium salts, among which especially the chlorid of calcium. 2. gelatine, which was used by Carnot the first time for hemorrhages, and which was found to be far superior to the calcium salts

The coagulating properties of gelatine

were discovered by Dàstré and Floresco, who were examining its changes taking place in animal organisms; they observed an abnormal clotting taking place after an intravenous injection of gelatine.

Gelatine is absolutely harmless; it furthers, together with the fibrin of the clot, the granulation of the endothelial cells, which form the vessels, and it adds much to the quick formation of the scar.

The preparation of the gelatine solution is as follows: 5 to 10 parts are dissolved in 100 parts of a physiological solution of common salt (7 parts common salt, 100 water). The mass is to be sterilized twice within two days for fifteen minutes by 100° centigrade. A few drops of carbolic acid can be added without destroying its properties. The solution is kept in a bottle and made liquid before use. The 5 per cent. solution is sufficient in ordinary cases; if the patient is weak and shows a tendency to hemorrhage the 10 per cent. solution is preferable.

A pellet of cotton saturated with the gelatine is introduced in the alveolus and left there two to three minutes, the time sufficient for the formation of the clot. In case of a second hemorrhage the pellet is to be left in place about six hours. After removal of application an antiseptic mouth wash is to be recommended for frequent use, which mitigates the pain and swelling.

The application of the gelatine is simple and clean. The pellet of cotton remains in place very well and keeps the blood from running down the throat, which in more severe cases often causes gastric troubles.

Large surgical operations which require much patience on account of the abundant flow of blood, can be simplified by the use of the gelatine solution. Dr. Carnot uses it locally together with some calcium salt internally, which latter furthers the clotting process whenever the patient is a recognized bleeder.

F. A. B.

PUTRESCENT PULP CANALS.

A great deal is said about the immediate filling of putrescent pulp canals. I have often wondered if the writers are men of experience. It is very easy to say a thing, but quite another to do it. Again, there may be a time when a given operation may be successfully performed, but the same would not do to rely upon as a custom or as a regular practice. We all know the value of the various antiseptic remedies, and we know they will kill or destroy the germs of infection, but with whatever cure an operator may proceed and whatever disinfectants he may employ, it is hardly possible for him to treat a tooth of this class in regular practice so that he can feel assured of the after comfort of the patient, if it is permanently filled at the first sitting; and particularly is this the case with those teeth which for years have been devitalized from traumatism or other like cause, the pulp chambers of which have not been opened. To open into them is a matter of extreme delicacy, and fraught with great danger of great discomfort to the patient. The condition is usually this: The pulp chamber having been the resort for all of the gases arising from the decomposed pulp tissue, with no opening for its escape, is probably completely full of these gases, and consequently any pressure from without will force some of it through the apical foramen, which immediately creates irritation by reason of the septic nature of the gas. A pulp chamber of this kind should not be opened with anything like a blunt drill, but with a delicate sharp-pointed instrument, and after it is opened sufficiently to permit the escape of the gas it should be left to the succeeding day before the operation is proceeded with, and even then the roots must be handled carefully, for if any of the débris is forced through the foramen trouble will surely ensue. Every dentist has a method peculiar to himself, and many are

not willing to learn of others, but when I hear of the successful immediate filling of putrescent pulp canals, and then exhaust my patience and whatever of skill I may claim to possess trying with the utmost care to do what some others claim to do, I conclude it is not a safe practice, and the attempt rarely justifiable. Now, as I take it, it matters very little what remedies are used—carbolic acid, creosote, alcohol, pyrozone, listerine, or any other of the accredited germicides. The object is to disinfect, to destroy the microorganisms, to sterilize the canal. After that is accomplished a drill may be carried with impunity as far into the canal as it will go. Listerine is a favorite antiseptic agent with me, because it is so easily applied and does not in any way irritate the mucous membrane should it touch it. After one or two applications the root is generally aseptic and can be filled. I have for years used alcohol for the same purpose and with pleasing effect. It seems to me it takes less time in the long run to give these teeth a minute or two each day for a few days than to spend a greater length of time at one sitting trying to accomplish at once what the remedies will themselves accomplish if time is given, and there can be no doubt that the latter will be much more certain in the result.

A.

Investment—Breaking and Mending.

Some one has given a good item on this as follows: Occasionally, in soldering, a portion of our investment breaks off, exposing a part of a tooth. We can ill afford the time to patch the break and wait for the plaster to harden again. The exposed portion of the porcelain may be perfectly protected by covering it with a thick paste of chalk and water. This mixture may also be used to fasten small pieces of gold to the solder-block while soldering.

ADVERTISING DENTISTS.

The dental profession has risen with more rapid strides to the dignified position it has attained than any other calling known. Its growth now seems likely to be stunted by the "dental parlor" fiend. They are nothing more than abominable parasites sucking the sap from the tree upon whose very fruit they depend for subsistence. Dr. W. W. Belcher, in *Items of Interest*, writes interestingly on this subject, as follows:

"Honor and glory are not nourishing, but to the true professional man dearer than wealth. Every man has two reputations—one among his professional brethren and one with the public. The first is most dear, but the latter brings his living, and often we find a man with no professional standing who succeeds for a time in deluding the public to the benefit of his exchequer. Many of us in the dental profession are woefully lacking in business principles, and perhaps the advertising dentist is better endowed than his fellows, but the advancement of dentistry has not come through the advertising offices; they are simply parasites, who live on the work of others, pulling them down by defrauding the public; they contribute nothing to the up-building or advancement of the profession or the investigation of new problems.

The man who advertises a "dental parlor," who decorates his office with valuable (?) oil-paintings or advertises superiority over all his fellows, is to be avoided; likewise, the man who advertises cheapness, for if his services were worth more he could command the higher fee.

When we consider the preliminary educational requirements, the time and money expended, the standing of dentistry as a profession is not to be despised nor to be lightly traded for a mess of pottage by lowering it and your *alma mater* by resorting to the tricks and wiles of trade.

"Be good and you will be lonesome,"

says the humorous writer, but the only permanent foundation of a dental practice is honesty and ability. A loud tooting of trumpets and bragging in the daily papers will perhaps bring more immediate results, but not a desirable nor appreciative clientele, and will in the end be less profitable than a practice conducted on a dignified and professional basis."

"Honesty is the best policy," is an old saying that time has proven the wisdom of thousands of times over. I heard one say the other day, "Yes, I guess I am what you fellows call a quack, but I am making the money just the same."

And I suppose he was making money and by making it he had sold his honor, degraded his profession and disgraced his *alma mater*, if he has one. What a specimen of humanity—honor all gone, professional dignity all gone, pride and ambition all gone; sold for a few pieces of silver. Is he any better than Judas Iscariot? Well, not much, if any. H. H. J.

Eating Sawdust, Soap Grease. Clay, Etc.

The Washington correspondent of the *Maryland Medical Journal* says: "The Pure Food Congress will meet March 2d in this city. Over 150 delegates have been chosen and a fierce fight will be waged for pure food and drugs. It is estimated that the people pay \$90,000,000 a year for sawdust, sand, soap grease, horse fat, clay, etc., not mentioning impure milk and other injurious substances."

Cork Bench Block.

Bore a hole in the bench block and glue a cork into it. Valuable for filing small pieces.

Headaches of nasal origin are commonly present in the morning on awakening; those due to eye-strain come on later in the day and after using the eyes.—*Medical Summary.*

FITNESS FOR MARRIAGE.

It does seem that something should be done to regulate marriage, and any legal enactment in that line is proper. An editorial in the *Maryland Medical Journal* on this subject is as follows:

"The Ohio legislature has been asked to pass a bill regulating marriage, so that persons contemplating matrimony shall be subjected to a physical examination and not allowed to be married and propagate unless they pass the physical test proposed. While it is hardly likely, with our present ideas, that such a law could be seriously enforced, it has certainly many advantages. But, on the other hand, that love which laughs at locksmiths will also hold in derision any statute which has for its object the keeping apart of two loving hearts.

"Whether this bill has been proposed for notoriety's sake or with pure sincerity, it has aroused no small amount of interest. Our insane asylums are hardly large enough to hold the insane, our jails and penal institutes are too often crowded, and the number of defectives which are allowed to go about unrestrained is shown in the daily press by the ever-increasing number of suicides, murderers and paranoiacs. Drunkards too often beget drunkards, the imbecile brings forth like kind and many of them, and thus is the world too thickly peopled with individuals who are only a burden and tax on the better class of citizens and taxpayers.

"While such a law as the one proposed could not be enforced without much friction and opposition, it would certainly lessen the number of marriages between defectives; but the question is, would it prevent the birth of like kind, even though illegitimate?

"In some countries marriage licenses are only granted when the man can show that he or his intended has enough to support both, and in the case of the military or those of rank each class has a certain price

which the bride must bring with her as a dot or dowry. In a free country like America, where laws are first made and then tested in court to see if they will hold, it would be difficult indeed to enforce any statute of the kind proposed.

"Still, such a measure has its good side, and if one State can show its ability to pass and carry into effect any kind of law which will tend to lessen the number of defectives incalculable good will be done not only to that State, but to the country at large, for other States will soon fall in line and follow the good example set. Even if the suggestion sounds like a joke it is well worth a test."

Orthoform, a New Anesthetic.

The discoverers of the new drug are Drs. Einhorn and Heinz, of Munich, Germany. Highly interesting experiments, which have been made during the last few months by Prof. Klausner, seem to give it an important place in the office of the surgeon in the near future. Says the *Correspondenz-Blatt*:

"Orthoform is a chemical compound of the methyl-ether and the amidoxybenzoic acid. It is a white, crystalline powder, has neither taste nor smell, dissolves very slowly in water, and is non-poisonous. On tender tissues it can be used in the powder form or as salve. It acts also as an antiseptic and can be given internally for tumors of the stomach, etc., in such cases the muriate of orthoform is preferred, being quite soluble."

As above stated, it dissolves slowly and is totally non-poisonous; in this lies its chief value. The effect of the anesthetic is a slow one—from three to five minutes,—but the average time of action is thirty hours. In some cases it was effective for even three and four days. That is longer than any other substance used for such purposes. That property makes it specially valuable for large wounds, burns, tumors, wherever it touches tissue with exposed nerve-ends;

it is without effect on normal skin and mucous membrane

Of great value is its property to limit secretion, facilitating so the healing process; it also seems to stop the flow of pus in many cases.

Prof. Klausner has given as much as sixty grams of it weekly to a patient suffering with cancer, proving it to be absolutely non-poisonous.

F. A. B.

Extraction and Pericementitis.

Editor The American Dental Weekly:

I want to write and thank you for what you said in THE WEEKLY of last week, in reply to, or rather as criticism on, a number of replies to a question propounded in a dental journal as to whether or not it is proper to extract a tooth while in a state of acute pericementitis.

After reading so many and so positively pronounced opinions in favor of immediate extraction under all circumstances, I was compelled to conclude that if they were right, and it seemed presumptuous to question that, I had been wrong all my professional life, for I have always considered it imprudent to extract a tooth under the circumstances named, and rarely ever have done it.

One reason why I pursue that course is that it is much more painful to the patient to extract in that condition than it would be after the inflammation and soreness in the surrounding parts had passed away. Therefore, I use palliative measures and defer the extraction until later, feeling that I can save the patient much unnecessary pain by that course. This alone, if there should be no other reason, I consider sufficient cause to defer extraction.

I am always glad to get THE WEEKLY. I feel sure of getting something good and useful from its pages, and I have never been disappointed in my expectations. Hoping it may live long and prosper, I am yours very gratefully,

W. R. CHRISTIAN.

Lumpkin, Ga., Feb. 18, 1898.

Storage Batteries for Cataphoresis.

The special fitness of storage batteries for cataphoresis, says Dr. Chas. A. Hawley, lies in their constant and steady voltage during discharge, which is due to several causes:

First, the internal resistance of the cell is very low, owing to the small space necessary between the plates. With perhaps a few exceptions the internal resistance of primary batteries is very high and interferes largely with their efficiency.

Second, there is no such thing as polarization of a storage cell. Polarization unfits most primary cells for closed circuit work, or for holding a steady current for any length of time.

The character and rate of discharge from a storage differs considerably from that of a primary battery, in that a very much larger volume of current can be obtained by decreasing the resistance in the external circuit. The capacity of a storage battery is measured in ampere hours or the number of hours the battery will, when fully charged, discharge one ampere current before becoming discharged. But the discharge can be completely controlled by varying the resistance in the external circuit. For example, a ten ampere battery will discharge one ampere for ten hours; or, reducing still further, twenty amperes for one-half hour, forty amperes for one-fourth hour, etc. If used with very great external resistance, as in cataphoresis, it would discharge a current of, say, five million amperes for two thousand hours.

In practical results in cataphoresis, I have found that the storage battery carries out all that would be expected of it from theoretical considerations.—*Extract Dental Cosmos.*

“Hunt is hunting in the West, Catching is catching in the South.”—*Ohio Dental Journal.*

To be in more excellent company, we have joined the Bethel.

Articulating Gold Crown.

Many people being troubled by an irregular articulation in this country, we often find it difficult to make a well fitting gold crown. To overcome this difficulty some few of us have resorted to the following method:

A gold band is accurately fitted to the tooth to be crowned, and after being contoured, cut to the desired length. The band is adjusted and wiped dry, and after pressing a small piece of wax into it (which may be allowed to overlap the edges of band a trifle) the patient is requested to “bite” firmly. After the wax has hardened it is taken out *with the band* in the most careful manner, and more wax flowed inside the crown. The articulating surface is then trimmed at the edges and an impression taken of it in moldine. The die and counter-die are made of Wood’s metal (or any other easily fusible metal) and a cap made for the band. After the two are soldered we have a crown that will articulate *perfectly*. I may add that it is well to fill out under cuts in the root with cotton in order to prevent the wax from changing its shape when it is taken off *with the band*.

If a rubber denture is desired and the “bite” is very close where we wish to place molars or bicuspidæ, I have arranged “Hollingsworth cusps” in the wax base-plate in the desired position, taken a model in moldine and stamped up the whole articulating surface of gold, to which I soldered two or three waved strips of gold (same as we do in gold plate with rubber attachment). This makes a very durable piece, and may save much vexation caused by the breaking of the thinly ground porcelain teeth.

N. C. ACHARD.

Zurich, Switzerland.

I am very much pleased with the AMERICAN DENTAL WEEKLY.

W. M. SLACK, Memphis.

THE American Dental Weekly

ISSUED EVERY THURSDAY.

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34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

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Subscription \$2.00 per year; \$1.00 for six months—including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, February 24, 1898.

Pivot Teeth.

There is one thing certain, and that is when a tooth has lost its crown, and the root remains, there is no way known to dentists whereby it can better be replaced than by pivoting. Not discussing at this time the relative merits of the different crowns, we will consider the preparation of the roots. I want to say incidentally, this article (if it may bear that distinction) is suggested by having observed teeth pivoted, and notably with Logan crowns, where from carelessness or perhaps improper consideration of dynamic forces in the preparation of roots, the same have suffered correspondingly and in some instances have been lost.

If a root is to be pivoted, it is not necessary that the canal should be drilled larger than is sufficient to admit the pivot; any more than that is wanton destruction of tooth structure, and works an irreparable loss to the ultimate success of the operation. It is true, the cement to be used will fill up

what is cut away, but it can never compensate for the loss of strength consequent upon the loss of dentine. Again the less amount used the better for the operation. It is a very common practice to take large pulp canal reamers and cut away the root more than twice large enough to accommodate the pivot. It facilitates the operation. The crown can be moved more easily to its position, and when finished appears as well as more careful work would, but the root has been weakened, and it can be said, with a certainty, that the operation will not be as durable as it would have been had the canal been reamed only large enough to admit the pivot. There is another view to take of this. When a tooth is to be pivoted, it is the last thing that can be done to save the tooth, it is the *dernier ressort*. It behooves then both dentist and patient to spare no pains to make as durable an operation as can be made; the cost should not be considered. The idea, what is the best should be supreme in the consideration of the method, and it is possible to make a pivot tooth nearly, if not quite, the equal of a pulpless tooth in appearance and in strength. Whatever is the best method to preserve the root, that method should be employed. Cheap methods may do very well in mechanical dentistry where the teeth are all out and nothing at stake, but when it is a question of preserving the teeth and roots for future use, only the best ought to be employed. Now, what is best? It lies between the Richmond crown and the gold backed pivot tooth, but each must have the cutting edges tipped with gold to catch the strain.

These, I say, are best, because the roots are better preserved if the work is well done.

Another point: when the root is prepared the foramen should be closed before the tooth is set with cement. This insures immunity from periostitis after the operation, a condition which is perplexing in the ex-

treme to the operator and at times almost intolerable to the patient.

We hear a great deal about banding roots to prevent them from splitting, but observation would seem to warrant the conclusion that roots split only when they are subjected to excessive strains, and then in most cases they have been weakened by having their strength unnecessarily impaired by reaming.

D. D. ATKINSON.

Plate Irritation.

The buccal edge of a plate should not be made sharp, but rounded. After a sharp edge plate has been worn a while it divides the fold of membrane under the cheek longitudinally, as if done with a knife. This is done by the constant pressure of the sharp edge, which may not cause active inflammation at first, but a gradual absorption of the tissue, but later the severed fold of membrane which hangs down closely over the side of the rim of the plate, which is not lifted by the muscles, and being not self-cleansing, will, with the constant effect of the sharp edge, cause severe inflammation, necessitating the cutting down of the rim.

Success.

The dentist's success can be measured largely by the interest he takes in dental literature. A man is not a success in any calling who does not avail himself of all the help obtainable for the prosecution of his calling. The world terms a man successful who accumulates money—the more money the greater the success. This is a low and debasing standard for success. The plane of money-making is a low plane to live upon. All higher principles are subordinated; the finer sensibilities are so blunted that they are not discernible in such a life. The ever-present question is, "Is there any money in it." It is impossible for

such persons to follow any profession to its highest aims and purposes. Avarice makes the charlatan.

Danger.

A few weeks since Dr. Atkinson called attention to the importance of placing a napkin or something else in the back of the mouth when extracting a tooth. At the time we thought him a little over-precautious. Now comes the news of the death of two patients caused by the extracted tooth slipping into the trachea. So his warning is well and timely.

Investing Compound.

As I have seen a good deal lately in the AMERICAN DENTAL WEEKLY about investment materials, I want to call attention to the one I have been using for six years, and I don't think there is anything else quite so well adapted to the purpose.

I make all my investments, whether for big pieces or little pieces, out of nothing but Teague's Impression Compound. The addition of asbestos fiber, which some recommend, only retards drying out without adding anything to the good qualities of the impression compound. It will protect your porcelains and stand all the heat you may apply to it without cracking or shrinking, and you may begin to heat it too in five or ten minutes after mixing. I don't use Teague's Impression Compound for anything but investments, but it beats the world for that.

E. G. QUATTLEBAUM.

Modeling Wax.

This is generally paraffin wax colored pink with alkanet. It is made into sheets by pouring a thin layer into a suitable vessel, and when set warming the dish, when the layer of wax is readily removable.

Crowning with Rubber Tooth.

Time does not improve this method given by Dr. Schulze in the *Dental Cosmos*:

"Band the root as for an all-gold crown, remove and cut away the front of the collar leaving a narrow band showing at the neck. Bevel the labial edge of the root so that the tooth can set well into the collar. Replace the collar on the root, dry out, and place a little softened wax onto the end of the root. Select a suitable, plain rubber tooth, nip off heads of pins, grind so that they will enter the collar, adjust and articulate, pressing the tooth against the wax. Carefully remove the collar and tooth. Invest in plaster and asbestos fiber. Fit a thin piece of platinum into the collar, burnishing it down onto the tooth, and bending it down to the pins. If it is desired to use a post, remove and punch the platinum plate at the proper place, and solder in a post; replace within the collar, and secure with a piece of binding wire imbedded in the investment. A little 18 K. solder will join together the collar, platinum plate and tooth pins. If there are any places where the collar does not fit the tooth closely, pack in gold foil before soldering. If the inner cusp does not fill the collar, or it needs lengthening for occluding purposes, get the desired shape with wax when fitting the tooth. Remove the wax after investment, pack in gold foil pellets, and add enough 20 K. solder to flow through it."

Query.

I have had two cases under my notice of rubber denture being *entirely covered* with a thin substance, making the plate have the same color as a highly polished and finely colored meerschaum pipe. Both patients are ladies who do not smoke and keep their plates scrupulously clean.

The rubber used is the red bowspring rubber. The water used is pure lake water.

Both patients are very healthy. It is difficult to remove this deposit, which is on *all* surfaces equally well distributed, even with pumice-stone and a brush wheel. Who can account for it?

N. C. ACHARD.

Zurich, Switzerland.

Swaging Cusps for Crowns.

It is well to know many methods. Here is a good one reported by Dr. Case:

"Imbed a natural tooth in a section of gas pipe about an inch long and three-fourths of an inch in diameter with moldine or plaster of Paris, so that only the crown surface and so much of the lateral surfaces as may be desirable are exposed. A piece of rubber tubing is then placed over the cylinder containing the tooth so that it extends one-half inch or higher, if desired, above the crown. Into this is poured Babbitt metal or any fusible alloy that is sufficiently hard to endure the swaging without changing form. This secures a matrix mold of the natural crown. To swage the gold cap, a piece of gold of required size and thickness is laid over this matrix and driven into it by a piece of lead.

"The method is very similar to swaging caps on the ordinary die-plate, but it has the advantage of securing any sized cap that may be needed and a greater variety of shapes. Of course it involves keeping near at hand a large assortment of teeth with which the matrix may be made."

Patent Medicine Profits.

To gain some idea of the profits of quackery, consider the fact that in one year, 1890, the manufactories of patent medicines in the United States sold their products for \$32,622,123. Now if the retailers doubled the price to consumers, as is more than probable, then the people of this country paid for their patent medicines, which very surely do much more harm than

good, money enough to have paid every one of the 104,805 "physicians and surgeons" of the United States an annual income exceeding \$600.—*New Orleans Med. and Surg. Journal.*

Why does not the medical profession take some steps to remedy this evil. Aside from those Congressmen whose pictures adorn the advertisements of that giant humbug, "Paine's Celery Compound," that body could be induced to enact a law that would require the formula of all such nostrums placed on the bottle. It does seem that great indifference is shown by physicians on this subject.

Feeding by Enema.

In an interesting article in the *Maryland Medical Journal*, Dr. Hemmeter, in speaking about the injection of food substances directly into the circulation for nutrition, says:

"The question naturally arises, can these food substances pass through the intestinal wall without having undergone any preliminary change? This I have investigated on the human subject in a number of patients. I occluded the transverse colon by blowing up a soft rubber balloon in its lumen, and, after washing out the descending colon and sigmoid by an antiseptic solution, I inserted weighed amounts of nutritive olive oil sterile milk and white of egg as high up into the rectum as possible. This portion of the bowel was after three to six hours washed clean by distilled water and the amount of the food substances that remained in the bowel determined by quantitative analysis. It was found that after three to six hours' retention in the sigmoid and descending colon nothing could be regained of fifty grams of white of egg, whilst of fifty grams of sterile milk we regained in one case 34 grams of residue, largely composed of casein, and in two other cases only traces of casein were found. About 50 per cent. of nutritive oil introduced was regained after three hours."

"Every Laugh Reddens the Blood."

Smith—Have you a good doctor?

Jones—Oh, yes; he fills the bill perfectly.—*N. Y. Journal.*

Customer—Here, waiter, bring me some milk.

Waiter—Condensed?

Customer—No; the udder kind."

Jones says that he thought his gas-meter had gas-trick fever, but now believes it to be affected with galloping consumption.—*Observer.*

"Of all the delegates I met at the convention," says Dr. J. L. Hill, "I liked him best who, on being asked what his business was, said, 'I am a cheer-up-odist.'"

A gentleman wearing a big chrysanthemum in his buttonhole attracted the attention of a small boy on the other side of the car. "Look, mamma," he said; "see the cold slaw on that man's coat."

Miniature Electric Motor.

An odd piece of jewelry has been made by a Texas jeweler and electrician. It is a scarfpin in the form of a tiny electric motor, which, though weighing only one pennyweight and three grains, is complete in every particular, and can be operated when supplied with a current. Gold takes the place of copper throughout, and notwithstanding the minute size of this little motor, it runs at a lively rate and creates quite a hum when supplied with current from a small silver-chloride battery carried in the vest pocket.

Filings for Filling Crowns.

For filling cusps in gold crowns, there is nothing better than fine gold filings, with a little gold solder intermixed.

N. N. VANN.

Attalla, Ala.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., MARCH 3, 1898.

NO. 25.

PULP MUMMIFICATION VERSUS SCIENCE?

Dr. W. H. Weaver's encouraging and refreshing article on "Pulp Mummification or Science and Pseudoscience," in No. 19 of THE WEEKLY, has induced me to come forth with a long intended desire to endeavor to put the method, whose sentence has been spoken by some of our professional brothers, to the front again. The reason of the latter to condemn pulp mummification is as illogical as flat, a method, which has been based on such natural and scientific principles, cannot be overthrown or set aside without a thorough test. I heartily congratulate Dr. Weaver on his frankness, I fully indorse his views and ask all those who have been experimenting on that line, to openly declare themselves for or against the method. Let those who have opposed it and oppose it to-day, after thorough tests, meet us "on even ground" and show us why it should be discarded why it should be called an unscientific, a lazy man's method! Have our brothers ever tried it or any other besides *their own*?

Let me go back and tell you how the idea to mummify pulps developed. It was the effort at conservative dentistry, in which it originated, as far back as 1874. Dr. Witzel believed that arsenical applications would destroy the diseased parts of the pulp only, while after amputation of the coronal part the ends of the pulp could be kept alive with proper treatment. He subsequently prepared a paste of the oxide of

zinc and carbolic acid, which was placed in the canals, while the cavity was filled in the usual way. Many teeth were treated that way by him and he had not to report a single failure. He soon observed that this paste would not keep the pulp alive, but would cause it to shrink to threads, permeated by the antiseptic. Since then some others have tried, with Dr. Witzel, to improve on his method. It was given to Professor W. D. Miller to successfully investigate and state certain facts, which eventually led to the method so wrongly criticised in late years. His experiments were exact and directed with much pains, as follows: Freshly extracted carious teeth, whose pulps were not putrid, were opened with large burs and the coronal portion of the pulp removed. A certain antiseptic, to be tested, was applied, covered with a sheet of tin or gold foil and the cavity filled with cement. These teeth were then planted in agar-agar and put in the incubator. After a certain time they were removed again, split open and the pulps taken out and put in an agar culture, already infected. The whole was placed back in the incubator. Wherever the pulps were impregnated by the antiseptic it was found that bacteria had not developed.

These experiments further on determined the value of the substances for pulp mummification and Dr. Miller described the most important properties of an ideal mummifying agent as follows:

Same must contain an antiseptic sufficiently strong to prevent decomposition

taking place while mummification sets in. Once mummified the pulp is not very likely to become decomposed and putrid.

It must contain an ingredient which will as quickly as possible cause mummification of the pulp tissues. It must contain a substance which, in conjunction with the other ingredients, will impart a white color to the mummified pulp and prevent discoloration of the tooth.

It must contain an agent capable of binding the whole compound together in a pasty state and making it penetrate deeply and quickly.

Since Professor Miller's discovery, which he advised to be used cautiously, as time only could be a safe test, others have taken up that work and variously modified the substances in use by him. Dr. Söderberg, of Sydney, Australia, was the foremost among them. He had obtained a substance which filled nearly all the requirements of an ideal mummifying agent. Here it is again:

Thymol	} aa3j.
Dried alum.....	
Glycerol	
Zinc oxide q. s. to make paste stiff.	

With this paste I have been working for over two years and not one case has come back to me a failure. The method of applying same differs only in minor points from Dr. Söderberg's. While I use it in multi-rooted teeth exclusively, I take great pains to remove as much of the pulp, going as far down or up the canals as it can be done without causing unnecessary trouble to the patient. My belief is that the smaller the particles of the remaining pulp the quicker and more thorough the mummification will take place. Further on do I lay great stress on absolute dryness of pulp-chamber and canals. With alcohol and hot air I withdraw as much of the moisture as possible. The paste sucks up to the ends of the canals readily, impregnating every particle and even entering the small dental tubuli. To insure myself that the

agent goes up far enough I often place a piece of soft rubber in the cavity and press it down. The patient will always let you know when you have reached far enough. In all cases where I was able to remove the greatest part of the pulp, I apply the paste in the usual way and then use gutta-percha points to fill up the canals. These points help to bring the paste in place and keep it there, insuring perfect mummification. It never occurred to me that this way of treating canals of multi-rooted teeth could be called an unscientific or a lazy man's method. I assure our readers that the work requires time and care to make it a success.

F. A. BROSIUS.

INFANTILE SCURVY—CASES.

This is a disease which seems only to have been observed within the last few years. It is not frequently reported, but doubtless is of frequent occurrence, and fails of recognition by the average physician, who is not capable of diagnosing it. It will be seen in these cases how it was treated as a different disease.

We can't but gather the idea that the disease is caused mainly by the artificial foods so freely used for infants in these days. It has become fashionable for mothers not to nurse their babies, but rather to turn them over to others to be fed on this, that and the other stuff.

Here are some interesting cases taken from the *Maryland Medical Journal*. Dr. C. W. Mitchell reports the following:

At the time I saw the child first he was lying motionless on the cot, with a look of extreme anxiety. The countenance and complexion of the child was of a muddy hue. Examination showed that he was of good size and not particularly anemic. There was about the head no sign of rickets, no protrusion of the eyes nor any tendency to chemosis of the face. The child had seven teeth, and on the surface of the

gum in the neighborhood of the teeth the tissues were very greatly swollen, soft and spongy, bleeding very easily and of a dark color. The portions of the gum not in relation with the teeth were perfectly normal and showed no tendency to bleed upon rather rough handling.

The child had quite active febrile movement, the temperature being at first 102.5°, with a pulse of 140. The joint symptoms were remarkable on account of the large number of joints involved. The right thigh was considerably enlarged throughout its entire length, and the left was enlarged at the upper and lower extremities. Any movement gave rise to a scream from the child. The upper part of the femur was the site of a very dense elastic tumor, which did not pit on pressure and was not attended by any local elevation of temperature. There was a very considerable enlargement along the sheath of the femur, and at the epiphyses there was a tumor. The lower extremity of the tibia of the left leg was also affected. On the right side the upper portion of the thigh seemed perfectly normal, but below the knee there was a large, dense elastic tumor corresponding to that of the opposite side.

The condition looked at casually was one suggestive of rickets, and the sensitiveness on pressure, coupled with the febrile movement, explained to my mind clearly why some years ago these cases were classified as acute rickets, but it is very well known now that while there is a coincident occurrence, there is no relationship between them.

The diagnosis of scurvy was made at once, and orange juice was ordered in tablespoonful doses three times a day. The child was put upon milk and cream, and my reason for having this begun while under my charge was that, knowing that they lived out of the city, I thought the mother ought to be prepared for making the modified food herself. The condition of the child led me to believe that it would be unwise to feed it

according to its age, so I put it upon food low in proteids, and after four or five days began to increase this percentage. In two days the child began to move the toes and fingers slightly; in four days the temperature had subsided to normal, and movements of the foot had extended to movements of the ankle. The child went home well at the end of three weeks.

I wish to call attention to the characteristic history as narrated by the mother. It corresponds almost exactly with the details of a case given in Holt's Book.

In answer to the question as to whether or not sterilized milk causes scurvy, I should say yes, but not because it is sterilized. I believe it has been followed by scurvy because the sterilization is, as a rule, thought to be all that is necessary for the proper modification of the milk. The public is educated to appreciate the value of sterilization and is apt to feel too much security in it. The digestion is not thought of, and I think that it is the explanation of the fact that sterilized milk is employed in institutions without the appearance of scurvy, for there care is taken to look after its preparation for digestion.

Between 65 and 70 per cent. of all cases recorded have occurred in children fed upon proprietary foods. This is not on account of any great deficiency in this food more than in any other, but because it is most widely used. The use of proprietary foods is followed by scurvy, because all of them are deficient in fats. This disease is absolutely preventable, and it is growing in frequency only because of the increasing inability of the average American mother to nourish her own child and the consequent increased use of the proprietary foods.

Dr. Finney: As I have not complete notes of a case which I saw I can only give it from memory. I saw the patient about a year ago. It was a girl about fourteen months old, the child of parents in good circumstances living in Washington. The

child could not be nourished by the mother and had been fed artificial foods. I was struck at once by the extreme and peculiar pallor of the child and its position. It was lying on the back, with the knees flexed, the legs abducted and any motion would cause it to cry out. The mother stated that a swelling began in the left ankle, then the left knee and continued progressively increasing in size, until when I saw the child there was marked swelling of each tibia and femur. I found on examination that there was intense pain, and I thought the swellings fluctuated slightly. There was some temperature, but not much.

The question of diagnosis, of course, came up, and as I had never seen a condition like this, and as the history of the mother's family was strongly tuberculous, I made the diagnosis of multiple epiphysitis. I made incision in the swellings, and as far as I can find out from the literature this is the first case of infantile scurvy treated by operation. The most I can say for it is that it did not seem to do any harm. I packed the wound and did not know what the condition was. I opened each swelling, evacuated the contents and tucked in a bit of gauze in each case. On thinking the matter over I came to the conclusion that the condition was that of infantile scurvy. I immediately sent for Dr. Booker, who saw the child that evening and confirmed this diagnosis. The child was put on proper diet and the cure was rapid and satisfactory.

It is rather interesting that only since 1894 has this disease been recognized in children; first by an Englishman and almost simultaneously by Dr. Northrup in this country. He reported 114 cases found in literature, many of which had been called acute rachitis.

Dr. Thayer: I had the fortune last summer to see a case in many ways like these. It was a child nearly two years old that had started to walk some months be-

fore and then had stopped altogether. The child was small for its age, with a large head, and it lay perfectly motionless. It kept up a little, low moan most of the time and cried whenever its legs were touched. I did not feel at all clear as to the nature of the case and sent for Dr. Booker. He at once asked about the food, and found that it had been fed on artificial food. It was put on proper food and soon got well. Dr. Booker said at the time that he had quite a number of cases, and most of his, I believe, had been using artificial food.

Dr. Craighill: About four years ago I had a somewhat similar case, but the child had been fed upon sterilized milk entirely. I had that stopped, and with a proper change of food the child recovered and is now a very strong, healthy girl. I should like to ask Dr. Mitchell if he has ever heard of scurvy being caused by condensed milk.

Dr. Sanger: It is rather interesting that just at this time when scurvy is disappearing as a disease of adults we begin to see it in children. A number of years ago I think I gave a child scurvy. It was a strumous child, that could not take milk, and for some time it was kept on the various waters, barley and rice, and the gums became very characteristic, spongy, etc. The condition disappeared when beef juice and lime juice were added to the diet.

In Dr. Mitchell's case I think the primary mistake was made in taking the child from the breast. I do not know of any cases occurring in nursing infants, and it seems to me we allow mothers to wean their children for too little cause. If more attention was paid to improving the mother's milk we would have much less scurvy. Cow's milk contains some undescribed element; what it is I do not know. Personally, I am somewhat a heretic about the sterilization of milk. I do not believe in it as much as I used to. The more we sterilize it the more we have to modify it.

Sterilization at 212° makes it more indigestible than non-sterilized milk. A large percentage of these cases occur in children fed on artificial foods, particularly those prepared with water.

Dr. Mitchell: Next to the proprietary foods condensed milk is the greatest offender.

CHICAGO MEETING—TEMPORARY CROWN, ETC.

On the 21st and 22d of this month the Odontographic Society celebrated its tenth anniversary, and indeed it was a glorious celebration. It was without doubt the most enthusiastic gathering of men of our profession that I have so far had the pleasure of attending. The clinics numbered over eighty, and were all most interesting, and a goodly share of them were given by well-known operators. It was a pleasure to watch the sociability of the gathering, where old and young in a cordial way exchanged ideas and views, not only on the speakers' platform, but wherever you looked you could see groups of two or three, of young and old men of our profession, heartily greeting each other, and discussing questions of the day. Some of the elder friends of the Society who were present, such as Dr. Taft, Dr. Watling, Dr. Black, Dr. Bonwill, Dr. Barret and many others were responsible for the intense enthusiasm and interest which was displayed by all those present.

All who were not already convinced of the benefits derived by attending such meetings, soon became so when they saw that the experience of many years had taught such men as those above named that the good resulting to them from attending such meetings far outweighed the loss of time, the fatigue, and the discomfort of traveling of many of hundreds of miles.

As to the clinics I can say but little, as I was a clinician myself and therefore had but little time to observe what others were

doing. However, there was one most interesting exhibition given by Dr. Taggart; he demonstrated a temporary crown to be worn while another permanent one was being made, so as to avoid for the patient the unnecessary unsightliness of having to mingle with others and showing the lack of a tooth. Briefly stated, the crown was made in the following way: A square platinoïd bar (platinum and silver) about gauge twelve and about an inch in length, is selected, next about three-eighths of an inch of one end of the bar, by means of a riveting hammer and the sharp end of the anvil, is somewhat flattened so as to produce an abrupt shoulder in the continuity of the bar, next a plate tooth of approximately the correct size and color is selected; in trying to pass the flattened end of the bar between the pins of the tooth flat on to its surface, it is found that the bar is too wide; with a plate-punch a small amount is punched out from both edges of the flattened end of the bar producing a slot for each of the pins, which are riveted down over the bar and thereby fill up that part which was made hollow by having malleted the bar down and produced the shoulder. The tooth is next soldered to the bar with soft-solder (of course without investing); after somewhat heating the tooth in a Bunson burner, a small quantity of gutta percha is moulded about it with the fingers, the pin is shaped to approximately fit the root; the whole is then somewhat warmed and pressed to place, no attention being paid to keeping the root dry; the unfinished piece is then removed, and all excess of gutta-percha is trimmed off; a fairly solid and a good appearing temporary crown has been made in less time than it takes to explain. Set the crown with gutta-percha.

A number of interesting papers were read by the elder men of the profession. Dr. Taft's paper, speaking of the benefit of society work, was endorsed on all sides and a keen interest in future meetings was aroused.

During the discussion the excellent work of Dr. Crouse, as President of the Dental Protective Association, was most highly and most deservedly praised, and the hope was expressed that no honest practitioners that had any feeling of good fellowship and honest interest in his profession, as well as a little care for his own safety, would remain without the fold of the Dental Protective Association.

The meeting concluded with a banquet, which was attended by about four hundred, and served well to further a friendly relationship among the practitioners.

H. H. S.

Chicago, Feb. 25th, 1898.

ST. LOUIS CORRESPONDENCE.

THE BEGGAR'S FORMULA.

The St. Louis Dental Society's Executive Committee has prepared a program for the year 1898 which will be ready to distribute before the end of the month. The year promises to be one of unusual interest, a number of the younger men are coming to the front and are encouraged by the older members. The meeting of March the 1st will be devoted to an illustrated paper, by Dr. Edward H. Angle on "Some Important Facts Relating to the Mal-occlusion of the Teeth."

A number of the St. Louis boys attended the Chicago Clinics.

For the past three years dentists in St. Louis have had frequent visits from dentists out of employment and having a hard-luck story; of late these visits have grown few and far between. One morning last week an old man called and announced that he used to be a dentist. He seemed to hesitate in presenting his mission, evidently reading my mind as I had my hand in my pocket, not my hip-pocket, ready to bring forth a dime, as I fully expected him to ask for something with which to get a cup of coffee and a roll; but a mistake had been

made, as he brought forth an ounce bottle with the glass stopper securely tied down. He announced that he had a superior cement for mending broken plaster casts, which would set in three minutes; he said that he had four things that he wished me to invest in—all for the small sum of fifty cents. One was the formula for the cement, which he demonstrated would do all that he claimed for it. The cement is made by dissolving celluloid in ether. He used the sheet celluloid which can be secured from dealers in art supplies, for a cement. Add sufficient celluloid to make a very thick, creamy paste. The broken surface is thickly coated and the parts held together for a few moments and then allowed to harden for not less than three minutes before handling. He also stated that a thin mixture was fine for coating models used in rubber work to prevent the plaster sticking to the rubber and also to give the palatal surface of the plate a polish, claimed that it was superior to collodion. I would suggest using the colored celluloid or to color the mass by the use of a little red analine, first dissolving the analine in a little alcohol. The advantage in the color is that one can see just where the surface is varnished and no part is skipped.

The second was a method of taking plaster of paris impressions for partial cases, without any danger of breaking the impression. The mouth is prepared for the taking of the impression by filling up the spaces between the remaining teeth with modeling compound and placing some of the compound on the side towards which a leaning tooth pointed, then coat the teeth and compound with the following mixture: Plaster of paris, one part, soapstone three parts. After taking the impression out of the mouth replace the cores in the impression.

The third was a method of making a plate stick, no matter what its shape or condition. With a soft lead pencil mark on the model the outline of the plate, going

across the heel of the plate, with a knife, make a groove, following the pencil mark, make a solution of rubber, with which varnish the groove, and then place in the groove a narrow strip of soft rubber, such as is used for making rubber stamps, the case is waxed up to the strip, and in investing allow the plaster in the lower part of the flask to come above the strip so as to confine the same when the flask is closed. If preferred, velum rubber may be used to make this soft rim.

The fourth was a method of making a die and counter, without the use of moulding sand. It is simply the dipping process, using the following alloy for both die and counter:

Bismuth.....	4 lbs.
Tin.....	2½ lbs.
Antimony.....	1 lb.
Lead.....	1½ lbs.

Melt the first three and then add the fourth.

If any of the readers of this should be called upon by the party mentioned, give him a hearing and something substantial to help him along. JOHN G. HARPER.

St. Louis, Mo.

Geraniumformol.

We took notice some time ago in the WEEKLY of the favorable and excellent results which had been obtained by the Formalin in connection with the oil of geranium in the treatment of putrescent root-canals. MM. S. de Marion and C. André, of Paris, who have been instrumental in bringing the properties of this combination to the front, have made further investigations, which were published in the *Monde Dentaire*. Formalin applied to putrescent root-canals will be neutralized and dissolved away by the products of putrescence, and if the latter are in abundance a frequent renewal of the dressing is necessary. The addition of the oil of geranium, which is a good antiseptic as well as highly deodorizing,

checks the further development of any septic matter and so brings the formol into play. The solution now in use consists of 80 parts of the combination of oil of geranium (20 per cent. solution) with formol (40 per cent. solution) and 100 parts of absolute alcohol. The presence of the latter and the oil prevent the oxidation of the formalin. This is of importance, as the occurrence of periostitis could be traced back to the formation of the acid of formol. Like most aldehyde compounds, formol takes up oxygen, yielding the acid of formol, which is very irritating. F. A. B.

College Publications.

Plugger Points. Number 2 of this interesting college journal has reached this office. It is a creditable publication by the students of the Dental Department of the Southern Medical College, this city, though we do not like the name. Such publications are of much interest and should be used to great benefit to those about to enter the profession.

Through them, those who are soon to go forth as graduates, can be impressed with a professional spirit and pride, that may keep many from stumbling into the sloughs of quackery. They can teach the way of professional life in a maternal way.

A New Movement of the Heart.

A cablegram from Paris, dated Feb. 12, states M. Bouchard has discovered a new movement of the heart by means of the Röntgen rays. It is a rhythmic dilation during respiration and is not connected with the ordinary movements of the heart. "It appears to arise," says *The Sun*, "from a diminution of pressure in the interior of the thoracic cage during respiration."

Will some one who can and does perform the operation successfully, tell us how to divest a tooth of its enamel preparatory to crowning it? Tell what instruments are needed; tell all about it.

Notes From the St. Augustine Meeting of the Southern Branch of the National Dental Association.

We wonder if that will not sound more pleasing to some.

President E. P. Beadles excelled all former efforts to procure material for a successful meeting.

We heard no one express regrets that the meeting was held at such an inaccessible place, but we are sure that the Society has agreed unanimously, that we will not go there again soon.

Success! Success!! was the unanimous verdict, but all conceded the fact that nothing was *gained* to the Society by meeting in Florida.

Papers! Papers!! Papers!!! Nothing like it ever seen. Three sessions a day for three days and nights did not give time to read more than two-thirds of them. Many good papers were read by title. One important committee did not report at all.

Such energy, such interest, such devotion to duty and such deference was never shown to a presiding officer, as was accorded President Beadles.

Several distinguished visitors were present. Prominently among the number was Dr. Woodbury, of Halifax, Nova Scotia, who gave us several interesting talks.

Of the meritorious essays at the meeting, we cannot refrain from speaking of the remarkably well prepared paper on "Dental Education from a College Standpoint," by Dr. J. A. Chapple, of THE WEEKLY editorial staff. This paper contains points of interest to everybody and is commendable for its clear cut views.

Who measures swords with B. Holly Smith, has got something to do to defend himself. Out of that frail body an intellectual giant is growing. Watch him.

Dr. J. Y. Crawford was there with his enthusiasm raised to the highest pitch, under

the stimulating influences of the balmy breezes, beautiful scenes, and sweet-scented flowers.

Did it ever occur to you, how many attend dental meetings, who never contribute anything for the support of the Society? Well, it is a fact, and without doubt, an evil is springing up on that line, which must be combatted. Benefits are to be received from attendance at a successful convention of incalculable value, and it is nothing else but a stingy penuriousness in a man who attends from year to year reaping the benefits, and shirking the payment of the small amount of annual dues necessary to keep the Society in existence.

Dr. G. F. S. Wright, of South Carolina, who is one of the oldest members of the old Southern Dental Association, was at the St. Augustine meeting. Dr. Wright has been a member of the Examining Board of his State for over twenty years. So many faithful years of service deserves praise and appreciation.

All attention must now turn to Dr. W. E. Walker, the new President-elect, and New Orleans, the next place of meeting.

H. H. JOHNSON.

The Arkansas Case.

I see in the last number of the WEEKLY a report of a case by Dr. Newbern, of Memphis, in which he exposes a very bad practice too often indulged in. He also states that the operator who did the work was registered by the Arkansas Board of Examiners in such a manner as to make the impression that said Board was responsible for doing the profession great harm. The Doctor certainly knows enough of legislation regulating dental practice, to know that all practitioners are allowed to register, who were actively engaged in practice at the time, regardless of qualifications. I expect I registered the person referred to, myself, but had no option in the matter, as has been done by Boards in the majority of the States.

Yours,

M. C. MARSHALL.

St. Louis, Mo.

THE
American Dental Weekly
 ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription \$2.00 per year; \$1.00 for six months—including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, March 3, 1898.

**Should Teeth be Devitalized
 Previous to Crowning.**

The impression seems to be gaining ground that the liability to after-trouble from crowning live teeth, where they have to be ground and shaped, fully justifies devitalizing all such as a preparatory step previous to operating. Dr. H. J. Goslee has written interestingly on this subject in a paper read before the Chicago Dental Society and published in *Dental Review*. His argument is as follows in favor of devitalizing:

"The encompassing of a tooth containing a vital pulp with a metal cap and the intervening layer of cement hermetically isolates and excludes it from all normal external influences, such as temperature and nutritive secretions, upon the nerve and blood supply, thereby being the mediæ of establishing an unnatural condition to begin with, from which it has been my privilege to observe and deduct its ultimate death is almost invariably bound to result. It is, I

am confident, only a matter of time. Does not the very study of nature herself seem to make it reasonable and self-evident? Is there not always some manifested revolt, to a greater or less extent, against the disturbance of that condition which aids and promotes functional activity?

"How often are we called upon to treat blind or even chronic abscesses involving roots carrying crowns, which have resulted from, and been the sequence of, the establishment of this same condition?

"And again, if a tooth is sufficiently decayed, or caries extensive enough to warrant crowning, there is or has, very likely, at some time been more or less inflammation, which renders less liable its permanent vitality under those conditions. And, furthermore, in the preparation of a tooth that has little or no caries present, as is sometimes permissible for bridge work, it is, owing to its sensitiveness, almost absolutely impossible to properly shape it for the reception of an accurately fitting band; and even granting such as possible in some cases, would not the shock be oftentimes severe enough to superinduce a stage of inflammation sufficiently virulent to hasten or cause the destruction of the pulp?"

The discussion which followed the reading of the paper did not entirely uphold the views of the writer. Dr. Schwartz, in opening the discussion, said:

"I consider that the removal of the enamel in all cases of crown and bridge work should be thoroughly done, and in trying to remove it from the teeth, in bicus-pids especially, as for instance lower bicus-pids, where the contour is so decided that the removal of the enamel would so nearly encroach upon the pulp that it would be asking a great deal of the pulp to withstand the shock, and afterward carry a bridge that would be constantly irritating it, you could hardly expect a pulp to live. My clinical experience is that in the majority of cases treated thus death inevitably follows."

The other speakers were not so decided in their views.

After all is said, in most cases common sense must dictate. No set rule can be made for any case or class of cases. In some instances the very nature of the case would suggest devitalizing being the best thing to do, while in others it would not be advisable at all. The theory that a cap of metal lined with cement, being an unnatural condition, would produce death of the pulp, will not prove so in practice. Where from close bite or other cause it becomes necessary to grind very much of the tooth away, devitalization may be best, but in most instances it is our opinion that it is not good practice to do so. H. H. J.

Pulp Canals.

It has often been said the subject of filling root canals has been overwritten, and is entirely threadbare, yet it is a fact that it is a question which comes so close to us in every-day practice, and at times gives us much trouble, and is of such vital interest to the patient, that the subject will not down, but instead continues to attract the attention of readers nearly every time, and furnishes interesting occupation to those who boast the patronage of science, and spurn the idea of anything commonplace. Dr. W. T. McLean read a paper on this important subject before the Ohio State Dental Society, which appeared in the February number of the *Ohio Dental Journal*, which is very interesting reading to the practical dentist, of which the following is an extract:

"It is well understood that the tooth receives its principal nourishment from the pulp, and if it were not necessary for its preservation, there is no doubt it would have been a natural factor to eliminate it. It is known that after the age of twenty-five there is an improved cuticle change occurring in the structure of the tooth, and this improvement is greatly lessened when the

pulp is destroyed. Owing to the fact that there is organic and inorganic matter which enters into the formation and substance of a tooth, they are equally essential for its maintenance. I divide pulpless teeth into two major classes, viz: The medico-surgical and the septo-carious. The first class are those where the pulp is found exposed, vital or partially so, and the second class are those where the pulp has become devitalized by septic and carious encroachment. In the first class the treatment is not complicated and the progress is good. In the second class there is invariably a septic condition present at the apices of the roots, and frequently a necrotic condition of the pericementum, and possibly a disintegration of the alveolar process, the result of necrosis. In this class the prognosis is only fair. I never attempt to treat a pulpless tooth upon which I cannot apply the rubberdam; to my mind this is imperative; after its accomplishment I obtain direct access to the cavity and canals of the tooth to be treated, never fearing the sacrifice of enamel, and dentin sufficiently to that end. In the first class the removal of the vital pulp is painlessly accomplished by the chlorid of ether spray (Bengue), which is supplied by Cumming & Co., New York. This spray requires about ten minutes' time; after the removal of the pulp, which is done with a stiff barbed broach, the tooth is permitted to return to its previous condition, after which the thorough cleansing and dehydration of the dentin surrounding the canal is accomplished. The canal is well wiped with Ceylon oil of cinnamon, and hot air blown into it for a few minutes. The heat vaporizes the medication and causes it to permeate the dentin slightly, and renders the canals and apical space sufficiently aseptic to prevent sepsis. The canals are now filled with powdered asbestos made into a thin paste with a fifty per cent. solution of silver nitrate. This paste is pumped into the canals by

using a plain broach upon which is wrapped a few fibers of cotton and completely filled. Harvard cement is used to protect the contents of the canals. The tooth thus treated is given forty-eight to ninety-six hours to become accustomed to its changed condition, after which filling, crowning or preparation of bridge abutment may be accomplished with propriety.

In the second class the operative procedure differs inasmuch as complete asepsis is more difficult to obtain, and a correct diagnosis cannot be made, as the degree of the pathological condition cannot with exactness be ascertained. We find in this variety foreign matter, pus and possibly necrosis of the alveolus. The treatment is as follows: The rubberdam is applied to the cavity and canals, an open, free access is obtained with aseptic instruments, and hot water is injected into the canals by a hypodermic syringe until all loosened debris is removed. Next pyrozone is injected; if pus be present it will be forced out; a few injections will suffice; bibulous paper placed conveniently will catch and absorb the overflow of medicament, and prevent soiling the patient's clothing. The canal is next dehydrated with Evans' root dryer, and cotton saturated with oil of cinnamon, loosely placed and retained in place with gutta-percha stopping. The patient is dismissed with instructions to return in forty-eight hours. The treatment is continued for three or four sittings, depending upon the severity of the case and the recuperative powers of the patient, allowing the same length of time between each treatment. When a fistulous opening is present, and the exudation of pus is noticeable, I bur through this opening and endeavor to reach the apical space, and inject pyrozone through the canals and have it traverse the fistulous tract. The object is to mechanically and aseptically cleanse it. I next partially dry this tract, and, with a hypodermic syringe, inject oil of cinnamon so that it oozes from

the gum opening. This is continued until fetid odor and sensitiveness are eradicated. The completion is the same as the first class, using my judgment in performing the most desirable operation."

Dr. J. Taft, in discussing the paper, said: "Where the pulp is to be destroyed, the course recommended by the paper is much better than to poison the pulp by the use of arsenous acid. This is often the cause of trouble afterward; sometimes the trouble follows quickly; sometimes it appears long afterward. This can be demonstrated by any one who is careful to note the result." Dr. Taft thinks inflammatory conditions will sooner or later follow where devitalization was accomplished by the use of arsenic, when there would have been immunity from any such disturbance, had some of the other methods, such as the use of cocain, been employed; at least, that is the inference to be deduced from his remarks. There is, however, one point in the paper that is not quite clear:

The writer says he never attempts to treat a pulpless tooth upon which he cannot adjust the rubberdam. It would seem to the practical mind upon this point, that he is either an exceptional expert in the manipulation of rubberdam, or that he suffers many teeth to be lost which other operators would save. It is well known that many operators fill the cervical portion of the cavity with amalgam for the specific purpose of being able to place the rubberdam before completing the operation with gold. With this exception it seems that the writer has given us a good paper.

Sensitive Erosions.

It has long been known that nitrate of silver would relieve sensitiveness about the necks of teeth caused by recession of the gum, erosions, etc. Dr. C. L. Synder gives a good method of applying the nitrate of silver. He takes a small silver wire about eighteen gauge and fixes it in a handle. By

slightly heating the end of the wire and touching it to the stick of nitrate of silver a portion will melt and a little bead will form on the end of the wire. This makes a splendid device for applying the caustic just where it is wanted. A platinum wire might be better than silver.

While speaking of these sensitive cases about the necks of teeth we would like to call attention again to Phillips' Milk of Magnesia. In some cases its effects are most happy. Patients will come to you with the complaint that they have been unable to brush their teeth on account of the extreme sensitiveness. Upon examination you find the gums about the margins red and angry looking, with a ragged, fringed appearance about the edges. The saliva will be found to be viscid and ropy, and if tested will in most cases give an acid reaction. In such cases there is nothing so effectual and beneficial as Phillips' Milk of Magnesia.

Instruct the patient to use it on the brush as a dentifrice morning and night, and also prescribe small doses taken internally. The results will be found to be satisfactory.

Every pregnant woman should be supplied with litmus paper and a bottle of Phillips' Milk of Magnesia, with instructions how and when to use it. If such precautions were taken we would have less trouble with such patients.

H. H. J.

Tit for Tat.

Our distinguished contemporary, Editor Bethel of the *Ohio Dental Journal*, makes a clever hit when he plays upon the name of our editor in chief. Speaking of the *Indiana Dental Journal* and its sagacious editor, Dr. Geo. Hunt, and this sparkling gem of dental literature—the AMERICAN DENTAL WEEKLY—both being young in years but old in wisdom, he says: "There is no escape; you have got to subscribe. With Hunt hunting in the West and "Catch" catching in the South, you just as well say 'O, Lord, there is no chance to escape now.' You

may as well give up and subscribe to anything they ask." It is hard for this scribe to say how much luck Hunt is having on his hunt in the West. He must at least have flushed his game by this time, but it is certain that "Catch" is catching in the South. He is old in the woods and knows just when to pull the trigger. He is a sure shot and brings home a bag full every time; but "Catch" is such a marvelous catcher that the game just tumbles to him.

Say, do you take the WEEKLY? A.

A Solution for Stopping Falling of the Hair.

The *Revue de Therapeutique* gives the following:

R	Hydrochlor. of quinine . . .	3j.
	Tannic acid	3ij.
	Alcohol (70 per cent.) . . .	o iss.
	Tinct. of cantharides . . .	3 iiss.
	Pure glycerin	3 iss.
	Aq. cologne	3 x.
	Vanillin	gr. ij.
	Pulv. sandalwood	3 j.

This mixture, after being well mixed and shaken, is allowed to stand for four days and is then filtered. It is rubbed into the scalp daily for the purpose named.

Arsenic in Cement.

Dr. Prothero, before the Chicago Dental Society, made the statement that tests revealed the presence of arsenic in most of the cement powders now on the market. Marsh's test is the one he applied. As it is a simple test, any one can make it, and prove or disprove this assertion. It is apt to be true, as arsenic is usually present in commercial oxide of zinc.

Can this be the reason why so many pulps die under cement fillings?

Polish for Nickel.

Mix rouge and lard. A flannel cloth filled with this preparation is excellent for rubbing the nickeled parts of dental furniture.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., MARCH 10, 1898.

NO. 26.

HISTORICAL.

Dentistry in the Twenties.

Extracts from the Works of Samuel S. Fitch.

Thinking it would be interesting to THE WEEKLY readers, I have spent a brief season with the teachings of the above author, who is accredited as being one of the lights of his day, and who no doubt gives us a faithful portrayal of our science at that time. Few, if any, shall be my comments on his teachings, but will leave to those who read these extracts to say if the people should appreciate what an intelligent application of scientific principles in our profession has done for them.

TREATMENT OF COMPLICATED CASES.

"Attempts to destroy the inflamed nerves of teeth, especially the molar and bicuspid, are not only very painful, but most usually ineffectual. If we succeed in destroying the nerve, the tooth is often rendered almost useless

"I here subjoin a case of an unsuccessful attempt to destroy the nerves of a diseased tooth, which came under the observation of my friend, Mr. Eleaser Parmley, of New York. 'In a front tooth the nerve is most commonly destroyed by a single operation, because the fang is single and has the advantage of being more perpendicular than in a tooth with divaricating fangs. But it is an erroneous idea that a diseased tooth, if it has more than a single fang, may be rendered useful and free from pain by destroying its nerves. The practice has only

served to expose the emptiness of the theory, since most of those who have undergone the operation, which can be termed little less than martyrdom, have barely found that they have been made to forget the usual pain of toothache in the unutterable agony of the operation. But this is not all the objection; for where the operator is so fortunate as partially to destroy the nerves of double teeth, as even this is very rarely the case, the membranes are apt to become diseased by inflammatory action, and the tooth requires to be extracted in a very short time afterwards. It cannot therefore be too strongly urged, that where a double tooth is painful and has become so much decayed as not to be capable of being saved by the operation of stopping, it should, in order to prevent all unpleasant consequences, be extracted immediately. In evidence of the fallacy of the attempts of destroying the nerves of the back teeth, I shall adduce a single instance, which came under my own observation.

"A gentleman possessing highly organized teeth, having twice suffered very serious lacerations of the bone from extraction, and having even been threatened with lockjaw, submitted to having the fangs of the first lower molars, which had long been a source of torture, drilled, with the hope of thus eradicating its nerves. The operation, after excruciating agonies, proved within a few hours to have been useless; the cavity of the tooth was then filled with a compound metallic stopping; but the pain returned with such violence that it was necessary to

remove it. The patient continued during many months to make every application and adopt every measure which the most experienced medical practitioners could suggest, but in vain. His protracted suffering brought on a low fever, accompanied by frequent delirium. Efforts were again and again made at extraction; but at the first touch of an instrument the patient was always seized with convulsions and the operation could not be effected. Having thus lingered on for six months, the tooth was fortunately extracted during a period of insensibility, the result of intense suffering; but although the expected local relief was thus obtained, several months elapsed before he regained his former health and vigor. The tooth was examined after extraction, when it appeared that very trifling portions of the nerve had been destroyed, that one fang contained a large and vigorous nerve, sending off five branches at its point; the other fang, a large nerve equally unaltered, sending off six branches around its point.'

"All these modes of destroying the nerve occasion great pain to the patient in most cases, and what is still more objectionable, by destroying the nerve, the rest of the vitality of the crown and body of the tooth is soon lost, and, at any rate, those parts change their color and often incline to produce a diseased state of the gums and remaining teeth; although bad consequences may arise to the patient from this course, still in some cases, from the desire of the patient or our own inclination, we may do it in preference to extracting the tooth. After destroying the nerve we should immediately plug the tooth and leave it to nature."

OF SUBSTANCES PROPER FOR FILLING THE CAVITIES OF THE TEETH.

"It would seem superfluous to speak particularly upon this subject." (If this subject was thread-bare in that day, what may be said of it to-day; or considering the bent and genius of the human mind, its

achievements and possibilities, may it not be said that, comparatively speaking, this same subject is as embryonic now as then? "A.") "One would suppose that the common sense and discrimination of men, and practitioners in particular, would determine this point after the years of experience that have elapsed since plugging the teeth has been practiced. But such is the ignorance or cupidity of some dentists at this period, that there are not wanting men who will assert to their patients that lead or tin is better than gold, and thereby impose in the grossest manner upon their patients and the public in general. Of this, as an illustration, I will mention the following case: Two young gentlemen who were preparing for the Christian ministry called on me in May, 1827, to consult me respecting their teeth. I found in both that their teeth were in a very bad condition. The front incisors of both were in a state of decay. I advised a course of dental operations, which would place their teeth and gums in a state of health, and that the carious front teeth should be plugged with gold; and more especially so, because they were intending to become public speakers, in whom the health and beauty of the teeth are indispensable to a cleanly appearance of their mouths, and perfect enunciation of language.

"They both went away, saying if they concluded to have their teeth operated upon they would call soon. One of them called in two or three days, and by a judicious course of operations on the principles before detailed and which will be hereafter, I rendered his teeth perfectly healthy. The upper incisors, two or three, I plugged with gold in a very perfect manner, so that I saw him in the next November and his teeth were all in fine order and health.

"While plugging his teeth he told me that his friend who came with him at first to ask my advice, had called upon another dentist who persuaded him that tin-foil was far better than gold for plugging the teeth,

that it was retained longer and was in all respects quite preferable to gold; and so little was the young gentleman acquainted with the subject, that he suffered the dentist to plug his teeth with tin-foil and two or three of his incisors, one of which he said was so far decayed that he thought best to leave it to ultimate destruction. Now any person can see the result of this case. A gradual oxidation to a certain extent of the tin immediately commences which gives the substance of the tooth opposite the plug a dark and repulsive appearance, and what is far worse beyond comparison, that by the gradual oxidation of the tin the caries of the tooth is suffered to go on, favored by the oxidizing metal, and ultimate destruction of the tooth is the inevitable consequence; whilst those as in the first case plugged with gold will remain in all probability external caries excepted, during the life of the patient precisely as when first introduced. It is but a few weeks since I saw the front incisor, shown me by a young lady, which had been plugged about two years, and with lead, in which the lead was almost completely oxidated and the caries had proceeded so far as to entirely destroy the vitality, and almost the substance of the tooth, so much so that I could pass a probe directly through the front surface of the tooth which was black and a mere shell. She told me that when the tooth was plugged it was but little decayed.

"Cases of this kind are seen every day, and yet some dentists have the hardihood to assert that tin and lead are as proper for plugging the teeth as gold, although be it said, to the credit of the profession, that very few respectable dentists are guilty of this abominable ignorance or dishonesty. Lead may be applied, as we have before mentioned, to cover the nerve of the tooth, and the filling completed with gold. Tin-foil, if pure, may be used in some cases for plugging the grinding-teeth if the patients are not able to pay for gold, or if the gold cannot be obtained."

METHODS OF RETAINING ARTIFICIAL TEETH IN THE MOUTH.

"Ligatures. . . . In this case we should have to continue our block of teeth to the last molar tooth or not be able to use a ligature, and should we do so, a ligature would not confine such a large block of teeth as firmly as they ought to be. In the next place, if made of silk, etc., they are extremely apt to contract an unpleasant taste and smell, become dirty, and the patient is obliged to change them very often. If made of gold or silver wire, then the patient will be troubled to untie them, so as to take out the teeth and clean them as he will desire to do occasionally, and he will be troubled to tie them in again. In the third place, they never give that firmness to the new teeth which we desire and the teeth are constantly moved by the tongue. The fourth and last objection I would mention to ligatures and one which, if we could pass by all others, would forever in most cases forbid their use altogether, is the injurious effects which ligatures suspending the teeth have upon those living teeth to which they are tied. Their first bad effect is to pull those teeth out to which they are tied, which they generally do sooner or later, or else they cut off the tooth, as I have seen done in repeated instances."

PHYSIOLOGICAL OBSERVATIONS UPON STUMPS OF TEETH, ETC.—MODE OF PERFORMING THE OPERATION, INSTRUMENTS, ETC.

"The instruments required are a pair of sharp-cutting forceps, like extracting forceps, only attenuated to sharp edges, and well tempered. These should be placed upon the tooth to be excised, and carried close to the gum, and even raise the gum a little, or depress it, as the case may be, when, with a steady, deliberate pressure upon the handles of the forceps, the tooth is instantly cut off; then, with a pointed instrument, we may remove and destroy the nerve. Having done this, if we wish to

engraft a new tooth, we may drill up the stump as much as will be necessary for the reception of a pivot; but we must not at this time insert the tooth; instead of which we put a small lead pivot in the fang so firmly that it will not drop out; we may then dismiss our patient for at least one week, with directions to avoid taking cold or heating himself much during that time. At the expiration of seven or eight days, if little or no inflammation has appeared, we may take out the lead pivot and engraft the new tooth. In cases where the tooth is so far decayed or crumbled away as not to require much cutting away, and where the lining membrane and nerve are dead, if we wish to engraft a tooth upon the stump we may drill it out as much as we wish to, and then insert our leaden pivot, as before directed; for if we neglect this precaution, inflammation, in a great many instances, will take place, so as often to compel us to remove the engrafted tooth, or at any rate it will greatly weaken the stump and occasion much suffering to the patient. It should be our earnest endeavor to save pain to our patients as much as possible, which will be done to a great degree by pursuing the practice I have here detailed. The many cases of most violent inflammation and extreme suffering occasioned by this mode of inserting teeth upon stumps without being prepared (so much so in many cases as to almost destroy the constitution and health of the patients) has often thrown this part of dental surgery into great disrepute, and has been a standing opprobrium to the profession. These wretched effects in every case when I have followed this plan, have been completely prevented, and the whole course of operation has not produced as much pain as the extraction of the tooth or stump would have done. Other modes of preparing stumps have been practiced, but I prefer this to any other. If the patients do not wish a new tooth to be engrafted, then we need not drill the

fang, but fill the internal cavity with a piece of soft, pure lead wire, so firmly introduced as that it will not come out unless done so by art. Little or no pain will ensue, and the patient's mouth will retain its form. I believe that this plan of treating the front teeth and of preparing stumps of teeth for insertion of artificial teeth is founded upon the most correct surgical principles, and if generally adopted will disarm this part of dental surgery of nearly all its terrors.

"We should, before inserting a new tooth upon a stump, cut away the end of the stump so that the end of the new tooth shall pass completely within the gum and firmly against the end of the stump. When so done this is the best mode of inserting artificial teeth with which we are at present acquainted."

ODONTALGIC PILLS.

"In applying medicines to the exposed nerves of the teeth, either to relieve tooth-ache or prepare the nerves of the teeth for receiving the presence of metallic stoppings, it is often convenient and indispensable to form our medicines into pills, so as to fill the cavity of a tooth in this way, from which fluid medicines would immediately pass off. I give a few forms of these. In their exhibition, the pills are to be adapted to the size of the cavity in the decaying tooth, and after introduced it should be covered with a piece of wax, so as to prevent the pill from being dissolved into the liquor of the mouth:

"R Pulvis gallæ..... 3 ii.
Opium..... 3 ss.
Pulvis camphoræ..... 3 jss.
Tinc. daturæ stramonii..... q. s.
Reduce the substance to pills."

D. D. ATKINSON

Perfect Model.

To make a perfect model, mix the plaster thin, and with a camel's hair pencil work it into the impression up to the gum outline, pour the remainder of the plaster in the impression.

H. D. WILSON.

TO REMOVE ENAMEL PREVIOUS TO CROWNING.

In answer to the query in last issue of *THE WEEKLY* I will give my method for the above operation, which is as follows:

Take a molar or bicuspid, for example, which is to be prepared for an all-gold shell crown. Where spacing will be required between the tooth to be crowned and the adjoining tooth, it can be more easily accomplished with vulcan disks, which are thin, strong, flexible and cut rapidly. Care should always be used not to cut the opposite tooth, which can easily be avoided by using pressure towards the tooth to be prepared. By the time sufficient space has been obtained these two sides, the anterior and posterior approximal, have generally been squared up very well, as these thin disks will easily pass down below the festoon of gum and remove all the enamel.

The buccal and lingual sides and the approximo-buccal and approximo-lingual corners is generally where the difficulty arises.

The buccal and lingual sides down to within a few lines of the gingival margin may be easily and rapidly cut away with small carborundum wheels, which now leaves the crown of the tooth above the neck in a square shape. The disk has flattened it on the approximal sides, and the small wheels on the buccal and lingual sides. By taking small, thin, double convex carborundum wheels these corners may be cut down until the tooth takes a proper shape and all the enamel is removed, except a little ring around the neck of the tooth, which generally extends up just beneath the gum margin. To remove this little ring of enamel there is nothing so effectual as the vulcan cups or concavo-convex wheels. The thin edge of these little vulcan cup wheels will pass easily down below the margin of the gum without scarcely wounding it and cut off all the irregularities and excrescences. The range of work which

these little wheels will do is remarkable, and they are hard and tough and do not wear easily. After cutting and leveling down the bumps, the surfaces of the crown should be planed off smooth by using scalers made very hard and sharp. For this purpose the ordinary diamond-pointed, double-edged scalers are best.

By placing the thumb on the crown of the tooth and grasping the scaler firmly in the fingers, commencing at the gum line and pulling downward towards the cutting edge, the surfaces can be effectually planed off and rendered perfectly smooth. If any enamel should have been left by the wheels it can be easily removed with the scalers in this way.

As these scalers come from the manufacturers, they are too soft for the purposes suggested above, and must be hardened. This can easily be done by heating the point to a white heat and plunging in cold water or oil. Some claim that mercury is still better. After treating them in this way you have an instrument that will cut enamel, or even glass if required.

In those cases of leaning third molars which have tipped forward on account of the loss of the molars in front, these little cup shaped vulcan wheels are indispensable for reaching the anterior surface.

I shall offer no apology for consuming so much space in describing a simple method of removing enamel. I believe the importance of the subject justifies it.

H. H. JOHNSON.

TAKE THE CHIP OFF YOUR SHOULDER.

For many months we have had a flood of criticism pro and con regarding the Faculties' Association and the National Board of Dental Examiners. There seems to be a misunderstanding or disagreement between them.

This has given men not connected with

either association, and opposed to one or both, an opportunity to "roast."

This certainly is an unfortunate condition of affairs for both associations.

They have been in existence for a number of years, and have done a great and good work. It seems to me like boys' play for the members of the two associations, now, to get into a fight after years of harmonious work.

By their good work they have raised the standard of the colleges and the standard for admission to practice in the various States. By their efforts State laws are gradually becoming more uniform.

Now it is hoped that they will not spoil all their good work. It is true of all bodies in power that they become more or less arrogant, but there is a time for all sensible men to call a halt.

Let each member of either association take the chip off his shoulder and go to work as he did in years past and hold the ground that has been gained.

There is a great amount of fault found with the action of State boards by the laity. It must be expected; but criticism of the "make-up" of State boards comes with poor grace from members of faculties. Look at your own association. Is it clean?

State boards, like all other bodies of similar nature, make mistakes in their membership and do foolish things. Our own board has made mistakes in both, and is criticised; but our board has done a noble work in our State, especially taking into consideration the faulty law that it had to contend with and the meager finances at its command. Now that we at last have a law providing funds for the board expenses, we have good men that are foolish enough to try to have that clause in our law repealed. In all due respect to the men engaged in this work, I wish to suggest that if they (by the kind consideration of our president) could have been granted one year as secretary of the board, with

scarcely enough money to buy stamps, under the old law, they would not have anything more to say.

Referring to the work of State boards in general, I do not deny that individual acts may be criticised, and that men get on the boards that have no business there. We find young and middle-aged men that in recent years have managed, after many trials, to pass the examination as members of the boards. This is not right, but the work, as a whole, has certainly been beneficial for the advancement of the profession, and the same can be said of the Faculties' Association.

Because they have erred in judgment is no reason why they should pull each other's hair. Neither should it give the dentists cause to denounce both as detrimental to the profession. When they meet in Omaha next summer they can't help but kiss and make up, because they will not be able to resist the temptation to see the Exposition.

E. L. BROWER.

Le Mars, Iowa.

Cataphoresis or Electric Medicament Diffusion as Applied in Medicine, Surgery and Dentistry.

By William James Morton, M.D., American Technical Book Company, 45 Vesey St., New York. Price \$5.00.

This is the first volume of any note that has appeared on this subject. Dr. Morton should be good authority on the subject. The work before us is not above criticism in its makeup. It may be that we are too accustomed to having things concisely put, leaving out all superfluous matter, of which there seems to be a good deal in this work. If it is to stand as a review of the history of Cataphoresis, then such matter as "Early Experimenters" is well put, and so are the early contributions of the author, and "Elementary Electrical Principles," "Services of Electricity." The many cases cited, and

some other matter, in all amounting to many pages, may be very well included. But for practical benefit, all that might have been omitted, and the value of the work enhanced. Books are not more valuable because of their size, but for their conciseness.

We are glad, however, to have the work by Dr. Morton. The subject is one worthy of book-making. The contents are:

INTRODUCTION.

Part I.—Historical.—Early Experimenters. Modern Revival. Development in Dental Surgery. The Writer's Contributions.

Part II.—Physics and Physiology.—Elementary Electrical Principles. Sources of Electricity. Simple or Chemical Osmosis. Electrical Osmosis or Cataphoresis. Electrolysis and Cataphoresis. Physiological Experiments.

Part III.—Apparatus and Outfit.—Electrodes for Medicinal Diffusion. Electrodes for Metallic Electrolysis. Dental Electrodes. Batteries. Rheostats. Medicaments. Central Station Circuits.

Part IV.—Applications in Dental Surgery.—Anæsthetization of Sensitive Dentine. Anæsthesia of the Gums. Antisepsis or Sterilization of the Teeth. Diffusion from Soluble Electrodes.

Part V.—Applications in Medicine and General Surgery.—Simple Cataphoresis. Cataphoric Medication or Electric Medicamental Diffusion. Electro-Cocaine Local Anæsthesia. Electric Diffusion from Soluble Electrodes.

Corroded Aluminum Plate.

Here is an item I would like the opinion of some of your readers on.

A lady called recently, for whom I had made a Chase aluminum combination plate seven years before. An examination of the plate revealed the lingual surface rough, corroded and eaten through in two places, while the palatal surface was as bright and clean as when made.

Two years ago, patron moved to the iron country. Was not the trouble caused by the iron in water? If so, would it have the

same effect on Weston's metal? The plate, was repaired by covering the lingual surface with thin vulcanite. E. H. KERTH.

Rhineland, Wis.

[Has any one else noticed deleterious effects on such plates by chalybeate water?—ED.]

Science Utilizes All the Ox.

In an article on "The Wonders of the World's Waste," William George Jordon, in the October *Ladies' Home Journal*, details how science at the present day utilizes the ox. "Not many years ago," he says, "when an ox was slaughtered 40 per cent. of the animal was wasted; at the present time nothing is lost but its dying breath. As but one third of the weight of the animal consists of products that can be eaten, the question of utilizing the waste is a serious one. The blood is used in refining sugar and in sizing paper or manufactured into door-knobs and buttons. The hide goes to the tanner; horns and hoofs are transformed into combs and buttons; thigh bones, worth \$80 per ton, are cut into handles for clothesbrushes; fore leg bones sell for \$30 per ton for collar buttons, parasol handles and jewelry; the water in which bones are boiled is reduced to glue; the dust from sawing the bones is food for cattle and poultry; the smallest bones are made into bone-black. Each foot yields a quarter of a pint of neat's-foot oil; the tail goes to the 'soup'; while the brush of hair at the end of the tail is sold to the mattress-maker.

The choicer parts of the fat make the basis of butterine; the intestines are used for sausage casings or bought by gold beaters. The undigested food in the stomach, which formerly cost the packers of Chicago thirty thousand dollars a year to remove and destroy is now made into paper. These are but a few of the products of abattoirs. All scraps unfit for any other use find welcome in the glue-pot, or they do missionary work for the farmers by acting as fertilizers."

Officers of the Florida State Dental Association.

At the recent meeting of this Association, held at St. Augustine, February 21st, the following were elected for the ensuing year:

President, S. W. Allen, Tampa; First Vice-President, W. Z. McLeroy, Orlando; Second Vice-President, A. J. Hannah, Umatilla; Secretary, C. H. Frink, Fernandina; Treasurer, L. M. Frink, Lake City.

Executive Committee: F. B. Hannah, Umatilla; J. N. Jones, Jacksonville; H. R. Estes, Palatka; R. L. McMullen, Palmetto; L. F. Frink, Jasper.

The next annual meeting will be held at Orlando, second Tuesday in May, 1899.

The Florida Association is composed of some very bright men, whose ability is recognized and appreciated far beyond their State lines. Chase, of Ocala, is not much of a talker, but is a worker and good all-round dentist, and as a *raconteur*, has no equal.

Jones, of Jacksonville, besides looking after the demands of a large practice, is on the *qui vive* for violators of the law.

The profession of Florida is greatly indebted to the doctor for his untiring labors in perfecting the present dental law.

Dr. Smith and others, of St. Augustine, were jolly good fellows. At their invitation a large number of the State and Southern members joined them in a sail down the bay, where discussions of shop were ruled out of order or forgotten, and where, now and then, the land lubber would feed an occasional fish and call for the usual antidote for snake bite.

Three cheers for Florida!

C.

Many subscriptions for the first six months of THE WEEKLY expires with this number.

It is said that the most frequent cause of death among professional men is that referable to the heart.

A. J. SAWYER, D.D.S.,
MANCHESTER, N. H.

President New Hampshire State Dental Society.

Andrew Jackson Sawyer, D.D.S., was born in the town of Washington, Wyoming County, Pennsylvania, June 8, 1859. He was educated at the common schools and at the Montrose Academy. He graduated from the Pennsylvania College of Dental Surgery in the class of 1881-82. Practiced his profession one year in White Haven, Pa., six years in Newmarket, N. H., and is now located in Manchester, New Hampshire, where he has been since 1889, and now enjoys one of the very best practices in the State.

Dr. Sawyer is a member of the New Hampshire Dental Society, has filled various offices in the Society, and at the annual meeting in October was unanimously elected its president.

THE AMERICAN DENTAL WEEKLY is a welcome visitor, and is always read with interest and profit. Its freshness and value in dental literature might be compared to the morning daily in secular news.

Very truly, B. RUTLEDGE.

THE
American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription **\$2.00** per year; **\$1.00** for six months—including Canada and Mexico; other countries **\$3.00** per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, March 10, 1898.

Cleansing the Mouth and Teeth.

If antiseptis means anything, it means cleanliness. A tooth in an aseptic condition is necessarily a clean tooth. Let's go a little further and say that a clean tooth never decays.

H. C. Kahlo, D.D.S., in an article before the Indiana Medical Society and published in the *Indiana Dental Journal*, writes well on Antiseptics, and after giving the necessary requisites for a mouth-wash, says the best time to use a mouth-wash is just before retiring. "At this time," says he, "the teeth should be properly cleansed by the use of the brush, the wash properly diluted, furnishing the liquid with which the brush is saturated. After the use of the brush the mouth should be thoroughly rinsed with the wash. Patients should understand that there is no such thing as the abuse of a desirable wash, and that the mouth-wash habit, if such an expression is

allowable, is a thoroughly desirable one, since cleanliness is next to godliness."

He is just like nine-tenths of those who write and speak on this subject. The brush and mouth-wash are stressed, and it is well to do so, but teeth cannot be made clean by these alone. There is no cleanliness without the silk or linen floss, which is the only thing that will remove deposits from between the teeth, where nine-tenths of the decay occurs.

Southern Branch of the National Dental Association.

PRESIDENT'S ADDRESS.

The president, Dr. E. P. Bendler, Danville, Va., in his annual address, dwelt at some length upon the objects had in view in the so-called "Consolidation" and the immense difficulties encountered by the two committees in their desire to formulate a plan that should do most to further the interests of the dental profession, the work accomplished being really the formation of a new organization, with provision made for branch organizations—one in the East, one in the South, and one in the West. As the majority of the members of the "Southern" did not desire their association to go out of existence, by an express understanding that organization has been continued as the Southern Branch of the National. The "American" might have continued as the Eastern Branch, but the majority preferred not to do so. It has, therefore, passed out of existence. There are good reasons for the continued existence of the "Southern." Such an organization is needed, not only for scientific advancement, but also from a social standpoint, the true Southerner being a social animal, created that way, with a desire to know each other personally, looking forward to the annual renewal of personal friendships. A meeting of Southern dentists is never a failure, even if there are but few papers, small discussions and but

little in the way of clinics. The most helpful hints are given in private talk. We know and appreciate the grasp of the hand, the welcome in the eye. Cold science is not all of professional life. After brief but feeling reference to the past of the old Southern Association, whose history is embalmed in the hearts of its members, the present position of the Association as a part of the National Dental Association was clearly defined, with an earnest deprecation of the cry of "sectionalism" that has been heard in some quarters. The question of *meeting expenses* was briefly discussed and also the best time for the annual meeting, the opinion expressed being that the month of February is best for several reasons. It is the most pleasant season in the Gulf States; it is not usually a very busy month among dentists; it will not conflict with the meeting of the National Association.

The importance of Association work was pointed out and the question of how to reach and attract non-members discussed. Examining Boards and college faculties, and the means of reconciling the difference between the respective National Boards; the appointment of dental surgeons in the army and navy, and also as examiners for insurance companies; dental patents; the Army National Museum and Library were among the subjects recommended for consideration at the present meeting.

Failures In Operative Dentistry.

Abstract of paper read at Southern Dental Association.

Dr. L. F. French, Lake City, Fla., in a paper entitled "Failures in Operative Dentistry," enumerates as among the more frequent causes of failures: 1. The use of dull instruments, especially burs, and the lack of keen sharp excavators and chisels in the preparation of the marginal walls; 2. Placing a metallic filling in too close proximity to the pulp; 3. The wrong choice of material, either of the plastics in the wrong

places from a desire to complete the work more rapidly, or of gold where not indicated by conditions, from the desire to obtain a higher fee, or an improper choice through yielding to the desires of the patient; 4. The failure to remove salivary calculus, calling to mind the injunction of Prof. Truman to his classes: *First*, examine well the mouth; *Second*, clean the teeth; then you are prepared to see what the further treatment should be. Let us impress upon our patients the grand lesson of cleanliness in the mouth as well as of the body; then we will have fewer failures in operative dentistry.

Revised Constitution and By-Laws of the Southern Dental Association.

In the absence of two members of the Committee on Revision of the Constitution, Dr. W. E. Walker and Dr. J. A. Chapple were added to the committee and the work of revision completed, the Constitution adopted in Atlanta, in 1895, being so amended to harmonize in all essentials with the Constitution of the National, adopted at Old Point Comfort.

The name adopted is: The Southern Branch of the National Dental Association. For Sections 1-6, of Article II., on "Membership," were substituted Sections 1-5 of Article III., of the Constitution of the National, thus incorporating the *delegate feature*. The attention of all the State Societies holding annual meetings between this date and that of the annual meeting of the National should be especially directed to this feature, as membership, either directly in the National, or through the Southern Branch, can only be secured through the presentation of *credentials* showing *election by ballot* at a regular meeting of their State Society. All delegates thus elected, who are aspirants for office in the National, must become "permanent members" of the National as provided for in the Constitution.

Important changes were made in the list of committees, *Materia Medica* and *Cataphoresis* being added to Section 6; *Bacteriology* added to Section 7; *Metallurgy* added to Section 8; *Nomenclature* added to Section 9; Sections 14 *Anatomy*, 15 *Orthodontia*, and 16 *Oral Surgery* being added to the list of committees to be appointed by the President within ninety days after adjournment.

Article XIV. of the Constitution of the National relating to branches, their powers and obligations, government, etc., and also the standing resolutions adopted by the National at Old Point Comfort, were appended to the Constitution of the Southern Branches.

This includes all the important changes made in the revision.

The Education Features of the Dental Association.

Abstract of a paper read before the Southern Dental Association.

The three great educational factors are, the journal, the college, and the Association. Our dental literature has contributed more to the advancement of the profession socially and scientifically, than any other department of the educational régime, and as an outgrowth of its influence we have the college and the Association, whose high curricula and chase code of ethics are the source of pride to every son of America.

The college professor is the vessel which bears the inspiring draught to our thirsty lips; he should be, and often is, an artist with instinctive genius for discerning the scattered forces of our nature and arranging them in harmonious accord.

The Association is a great confessional, where we relate our failures, pointing to where the hidden reef lies beneath the glassy surface. We bring our problems and ask advice. We also bring the treasures which we gather as we climb the

rugged steeps of experience and scale the mountains of difficulties. The Association is also a great store-house which holds within its capacious vaults the accumulated wealth of hundreds of lives devoted to toil and study. It is a kind of professional Mecca to which we make annual pilgrimages to pay tribute at the shrine of progress, and acquire strength for the ever increasing responsibilities of life.

Upon the shoulders of the dental profession rests the burden of educating the public. There is scarce an institution of learning to-day which has not in its curriculum a treatise on "physiology and hygiene," and its campus and gymnasium for the cultivation and development of the sinews of the body; but *the oral cavity*, the most important department in the human economy, is passed with scarcely a word. The toothbrush is more important than dumb-bells, and dental sanitation the first step in hygienic routine. I admit the need of dental surgeons in the army and navy, but the nursery needs dental attention more than the garrison, and the schoolboy more than the soldier. The sooner we recognize in the boy the fetus of the man, and the baby as our most important patient, the sooner will we attain the ideal in dental achievement.

It has been said that the Association consists of egotists seeking for office; the college professor electioneering for students; the inventor advertising his appliance, and the depot man peddling his wares! But if a man is qualified to serve his profession in an official capacity, it is his duty to use legitimate means for the attainment of such a position of usefulness and honor; it is the duty of the college to let the profession know the material she has in her faculty and to demonstrate the advantages offered; it is kind of the inventor to show us his appliance and show us how to use, thus saving us from investing in something else we might be unable to use to advantage;

and the depot man confers a genuine favor on those of us who live in the country, by his magnificent displays of all the paraphernalia of our profession. So these accusations bring no discredit upon the Association. May this convention mark the dawn of a new era in dentistry which shall spread as the morning light, until the dark shadows of ignorance and superstition shall have given place to the glory of intellectual day. The social, intellectual and clinical features of the "Southern" have stood for years without a parallel. Let us then build upon the prestige of the past a "Parthenon" for the future. The wise Creator did much for every clime . . . but when the Lord made "Dixie" he did his best.

The ideal dentist is an incarnation of German learning, French art, English thoroughness, American push, and Southern chivalry.

J. PERCY CORLEY.

Greensboro, Ala.

Some Failures Attending the Use of Weld's Chemico-Metallic Method of Filling Root-Canals.

On the 10th of last July I removed the pulp from a second upper left bicuspid for Miss G., age twenty-two, and filled the root-canal with a Weld's chemico-metallic point, following the directions given by the inventor.

The tooth was then filled with amalgam. On August 17th the patient returned with a severe alveola abscess upon the tooth. The filling and point were removed, an incision made through the gum and alveola process, and the abscess treated and cured in the usual way, the root being filled this time with chloro-percha and gutta-percha cones.

On July 15th an upper right first bicuspid was treated in a similar manner for the same patient—the pulp being thoroughly removed from both roots, and the roots be-

ing filled with the points. A gold crown was then inserted. The tooth gave no trouble until the middle of December, when it began to get sore. When the crown was removed on the 29th inst., there was a copious flow of rather thick pus from the lingual root-canal as soon as the point was withdrawn. At the same time at which I was doing the work on the teeth above mentioned, I also devitalized the upper left first bicuspid and lower right second bicuspid, and filled the root-canal with chloro-percha and gutta-percha cones, and they have given no trouble whatever. I used about thirty of the points during July and August, and have had one other similar experience.

While the others have given no trouble as yet, I am afraid that it will be. *Au revoir*, but not "good-bye"—DR. H. B. HINMAN, in *Ohio Dental Journal*.

Educated dentists are expected not only to keep posted professionally, by the laity, but they are expected to keep abreast of current events. There is a publication which for several years we have enjoyed monthly, because the whole world, in every phase, is reviewed and laid before us in concise style. Every important event, from everywhere, and every magazine article of note is made ready to assimilate, having been digested. We can but refer to the *American Monthly Review of Reviews*. Edited by that brainiest of editors, Albert Shaw.

We do, unhesitatingly, advise a subscription to this wonderful magazine. Price, \$2.50. Address, 13 Astor Place, New York.

The Mississippi Dental Association will meet at Jackson, Mississippi, on April 6th, and will be in session three days. The Board of Dental Examiners will meet on the 5th

P. H. WRIGHT,
President.

HOWARD STEWART,
Secretary.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., MARCH 17, 1898.

NO. 27.

POSTERIOR TEETH APPROXIMAL FILLINGS.

MY DEAR PHILLIP:—In my last letter to you I dwelt particularly on gold fillings in front teeth, and throughout you could observe opinions expressed on the various methods. It is hard to get two men to agree on one thing, or one method, and it is quite impossible to get all men to agree on anything, or any method. So what I now write will perhaps not affect the indorsement of all practitioners, but will be found on the line of safe and practical dentistry and will go far to secure the greatest comfort to the patient. We will consider in this letter the treatment of approximal cavities in posterior teeth, including the bicusps. In the normal jaw, these teeth are so arranged that their crowns touch all around the arch, while at the gingivæ there is considerable space into which the gum tissue finds a normal resting place, protected from the force of mastication by the arch above, formed by the contact of the crowns of the adjacent teeth; but when this protecting arch has become impaired by caries or by filing or other permanent separation, the tendency will be for food to be forced into this space by the teeth of the opposite jaw, which will prove to be such an annoyance to the patient as sometimes become almost unbearable. To such extremity will this vex the patient, that there is often a feeling that it would be far better that one or the other of the teeth should be removed. A good illustration of how far

this annoyance could reach may be found in the following incident: In the herbivora, nature has provided the ideal molars. Once while walking in the country, my attention was attracted to the skull of an ox which, upon examination, disclosed that by some means, perhaps chewing a piece of bone, oyster shell, or gravel, one of the molars had been split. Into the crevice so formed grass had been packed from time to time until the soft tissues had yielded to the pressure and then the bone, until it was forced to a position far beyond the apices of the roots of the teeth. So striking was this to me that I investigated far enough to satisfy myself that the ox had died from starvation on account of the pain incident upon mastication. Whatever may be said of permanent separation in the front teeth, an operation upon the posterior teeth which leaves the interdental spaces exposed to pressure in mastication if the same is so situated as to become impacted with food, is a failure. The writer spent some few years of his humble life suffering from this very thing and therefore has a feeling acquaintance with the subject. A second bicuspid and first molar, each having a cavity approximate to the other, had been filled "flat," and there is no need of my trying to describe the discomfort this condition engendered. Suffice it to say, I never did enjoy a meal, especially if beef was on the table, so long as it lasted. In the course of time these teeth were separated and each contoured with amalgam so that their original shape was restored. This last operation was performed in 1889, and

to this day I have experienced no discomfort from those teeth. The proper remedy lies in judiciously contouring the teeth to their original shape. In some cases where there is much loss of structure this is best done with crowns; in other cases with gold fillings, and in still others with amalgam; the judgment of the operator must discriminate. But while we have seen some very good articles advocating such a course, I do not think it good practice to bridge amalgam filling from one tooth to another. Of course this would prevent food from being impacted in the spaces as above written, but it is barely possible that the fillings would save the teeth into which they have been anchored, being subjected to the heavy strain which would necessarily fall upon either tooth in mastication.

This letter does not purport to give any new ideas, but it is often the application of things that are already known which marks the success of the professional man.

A.

MAKING VULCANITE PLATE.

The following method of making vulcanite plate, by Dr. W. E. Walker, is so practical that we feel every one should be familiar with it, especially to do artistic work:

Having secured an accurate plaster-cast, coat it with rubber cement (amber cement furnished by the Chase Combination Dental Plate Company is excellent for this purpose). Press on to the cast a sheet of vulcanizable rubber, to which it will adhere because of the rubber cement. When pressing the rubber on to the cast, if there are any decided depressions on the alveolar ridge, they may be filled with small pieces of rubber before the large piece is put over all, which will give a uniform surface. This is now vulcanized, but only about one-half or two-thirds the usual time. This gives a vulcanit base plate which will fit more

accurately than it would if made by any other method, as the cast escapes the usual screw pressure which obliterates the finer features of the cast, and which occasionally results in fracture of the cast, as shown by the sharp thread-like ridge which is often found crossing the vulcanized plates.

This is now used as a base-plate in obtaining the occlusion, or "bite," when it is filled with plaster and placed on the articulator. To this vulcanit base-plate the teeth are now waxed, and the plate is found to be much more steady and more satisfactory while trying in than if only a wax-plate had been used. Another advantage in this method is that the rugæ are preserved; and if it is found that the plate does not fit, we can take another impression, and thus save the time occasionally lost in setting up the teeth when the impression is faulty. The gums may now be carved up and the plate finished in the usual way; or at this stage the following method may be adopted: Having waxed the teeth on the vulcanit base-plate and tried them in, remove any wax from between the teeth, which can be done with chloroform. Now, instead of carving up the gums, lay a strip of moldin on the gum at the necks of the teeth; punch holes in a semi-circular piece of thin rubber-dam, and pass the teeth through, stretching the rubber over the moldin, which, by a little manipulation through the rubber, will form a very natural gum. When and where necessary the dam can be turned back and moldin added, and again pressed to shape under the rubber dam. After flasking, the dam is pulled out and the moldin brought with it, leaving the plaster clear.

Another great time-saving method, which can be used in some cases, is as follows: Having removed the bite-wax from the vulcanit base-plate, clear the surface of the latter with chloroform, benzine or gasoline. The alveolar ridge portion is next coated with amber cement and covered with a

sheet of rubber, not extending it over the palate. The teeth are now warmed and pressed into the rubber, when it will be found that the rubber bulges over their necks, forming a very natural festoon, without any spatulation. Teeth with a slight groove at the neck, such as are made for celluloid work, are best for this method. In trying the piece in the mouth, any desired change in the position of the teeth is made by removing the tooth, warming and resetting. When the teeth are satisfactorily arranged, a piece of modeling composition is used to fill the vault to support the teeth from the lingual side.

When the composition is hard the teeth are removed and a thin sheet of vulcanizable pink rubber is placed over the labial and buccal surface, extending over the depressions in the red rubber from which the teeth have been removed, and into which the pink rubber sinks and shows nicely where each tooth is to be placed. Each tooth is now warmed and replaced, the impression in the compound serving to guide each tooth into the correct position. The piece is now flaked on the cast and plaster built up so as to support the buccal and labial faces of the teeth.

When the plaster is hard the modeling composition is removed. Small pieces of rubber are now warmed and placed about the pins so as to anchor the teeth, which must first be coated with amber cement.

The Griswold flask is excellent for this work, as it supports the plaster which surrounds the teeth, but an ordinary flask will do. No superating fluid is necessary before filling the upper portion of the flask, as it will not have to be opened till vulcanized. No allowance of time is to be made for the previous vulcanization of the base plate. When the piece is removed the usual excess is not found, and after a little trimming at edges of plate and over-pins, attention can be given to labial surface, which is found to require no scraping, but should be

cleaned with pumice carried by bibulous paper moistened with water or alcohol, or best of all, chloroform, and then with chalk on chamois or flannel; after which the color of the gums is improved by placing in a glass dish of alcohol in the sun, which bleaches it.

Note that the time usually spent in "waxing up" is saved; also the time usually spent in waiting for the plaster to harden that the flask may be opened; likewise that ordinarily consumed in washing out wax, packing and closing flask, as well as that generally spent in scraping and filing, while an even more important consideration being that the hard vulcanized surface of the rubber is preserved most all over the plate. The rugæ are also well represented, as the rubber over that portion is uniform in thickness.

SILHOUETTES.

What would a meeting of the Southern be without J. Y. Crawford, the Demosthenes of the Association? He always answers to the roll-call, a fact which can be said of but few ex-presidents. His presence is an inspiration and a benediction always to any meeting.

Then there is B. Holly Smith, who is ever ready with strong, clear-cut argument and apt illustration, who fascinates you with his logic and impresses you with his earnestness. As an advocate of the law his achievements would have proven second to none.

The familiar countenance of that patriotic soul, G. F. S. Wright, recalled memories of the long ago when the Association first donned its swaddling clothes and was fondly and liberally nurtured by his generous heart and mind. A seat is always reserved for this golden-hearted Knight.

Our editorial friend and confrère, H. H. Johnson, doesn't occupy as much space and breathe as much air as some others, but he

manages, nevertheless, to make his presence felt. Besides contributing two interesting and valuable papers, and doing a clinic, he held up his end in great shape as the only representative of the National Board of Dental Examiners present. The little Hercules stood his ground against all comers, and was rewarded with the office of Second Vice-President.

That quiet, gentle and graceful figure, whose nimble fingers are moving swiftly over her pad, occupies an exalted place in the esteem and affections of the Southern. Her contributions to dental literature are sufficient to embalm her name in history, and evoke that universal praise and admiration which the profession at large have unstintedly awarded her. The Association honored itself greatly when it elected Mrs. Walker an honorary member.

Cowardin, Holland, *et al*, preached the funeral of the Richmond crown and made strong effort to give it a decent interment, but Crawford, with faint support and encouragement, demanded an inquest, and thus the corpse reposes in the ice-house awaiting the final verdict.

Cook declares that he is in imminent danger of arrest whenever he relates a good story to Brabson, for the latter laughs so loud he disturbs the devotional exercises throughout the town. J. A. C.

Rubber Dam Economy.

For front teeth a piece of dam cut diagonally will not only serve the purpose better, but will save one-half. A small cravat clamp at each corner with a band back of the head, will secure it perfectly. The lower corner will drop over the mouth. The dam will be without wrinkles. Cut a square of dam from the roll and cut the piece diagonally in two. Punch the holes in the base of the triangular piece.

All eyes are now turned to Omaha, which is the dental Mecca for 1898.

Meeting of Southern Branch of the National Dental Association.

The first annual meeting of the Southern Branch of the National Dental Association, which convened at St. Augustine, Fla., Feb. 22d, was, beyond question, the most successful ever held in the history of the old association.

In point of numbers in attendance, they were not equal to former occasions, but what was lacking in this particular, was more than compensated for by the unusual number and rare excellence of the papers read.

All praise is due, and is enthusiastically accorded, President Beadles, for his grand work in bringing about such a signal finale. It must be remembered, too, this was accomplished in six months' time.

As a presiding officer, President Beadles was superb; and had the law permitted, he would have been his own successor as a fitting recognition of his valuable services. Indeed, all of the officers gave the president most hearty support, and no little success of the meeting was due to their efforts. A proper appreciation of this fact was shown in their promotion and re-election to their respective offices.

We desire, right here, to place the National Association on notice that they will have to look well to their laurels if they succeed even half so well as their Southern alliance.

The meeting developed the fact that the papers read, with one or two exceptions, were by the younger element of the Association; and as already stated, evidenced much thought in new lines, were carefully prepared, and evoked discussions which were rather commendatory, than combative in character.

At the invitation of President Beadles, Dr. A. K. Fort, Professor of Bacteriology in the Atlanta Dental College, read a valuable paper, stressing the importance of a knowl-

edge of bacteriology by the practitioner of dentistry, which would enable him, in no small degree, to make intelligent selection and proper application of germicidal and antiseptic agents in hygienic treatment of oral diseases. The doctor showed, by numerous experiments, which he had specially prepared, the growth of bacteria in septic conditions, and the effects of various antiseptics upon the different cultures of bacteria. This was a novel feature of the proceedings, and was greatly appreciated by all present.

Dr. Weld, of New York, illustrated, by the aid of the stereopticon, his chemico-metallic method of root canal filling, the practicability of which was variously estimated.

Dr. T. P. Hinman, at no little inconvenience, but for the pleasure of those present, demonstrated the practical workings of the X ray, giving a brief history of the discovery and valuable application of this wonderful adjunct to modern surgery. Each one present, the ladies especially, had the satisfaction of seeing, for the first time, the bones of their hands. The doctor exhibited excellent X ray photographs of subjects in which were shown the location of traumatic injuries.

A resolution setting forth the necessity for the appointment of dental surgeons to the army and navy, and urging Congress to pass a law to this end, was adopted without a dissenting voice. To carry this resolution into effect, the following gentlemen were appointed a committee to act in harmony with a like committee to be appointed by President Fillebrown:

J. A. Chapple, Atlanta, Ga.; E. P. Beadles, Danville, Va.; B. Holly Smith, Baltimore, Md.; M. F. Finley, Washington, D. C.; Henry B. Noble, Washington, D. C.

Officers elected for the ensuing year are as follows:

President—W. E. Walker, Pass Christian, Miss.

First Vice-President—T. P. Hinman, Atlanta, Ga.

Second Vice-President—H. H. Johnson, Macon, Ga.

Third Vice-President—E. F. Adair, Harmony Grove, Ga.

Treasurer—B. D. Brabson, Knoxville, Tenn.

Corresponding Secretary—C. L. Alexander, Charlotte, N. C.

Recording Secretary—S. W. Foster, Atlanta, Ga.

Two members on Executive Committee for three years: I. Simpson, Rock Hill, S. C.; E. G. Quarlebaum, Columbia, S. C.

The Chapin A. Harris Memorial.

At the St. Augustine meeting Dr. Wm. E. Walker called attention to the various efforts that have been made to collect a fund for the erection of a mortuary tribute to the memory of Chapin A. Harris, the founder of the first dental college, the editor of the first dental journal, the author of numerous standard works in dental literature.

Work in this direction was undertaken by the "Chapin A. Harris Association of Baltimore" in 1890; by the Virginia State Dental Association in 1893-4. Circulars were issued in 1895 and 1897 in regard to a "Harris Memorial Fund," of which the Snowden and Cowman Manufacturing Co., of Baltimore were made custodians.

The Southern Dental Association in 1894 appointed a committee to confer with the different State societies, and to bring the matter before the American Dental Association, Dr. H. E. Beach being elected treasurer of the fund which it was hoped to receive by these means.

In the discussion of the subject Dr. E. P. Beadles reported that, according to the resolution adopted at Old Point Comfort, in 1894, he had written letters to the secretaries of all the State associations, replies to which were directed sent to Dr. H. E. Beach, custodian of the fund.

Dr. Beach, not being present, no report was had from him.

Dr. B. H. Smith related the efforts made by the Baltimore Association in 1890, the fund then accumulated being doubtless still held in readiness for any future action in this direction.

Dr. J. Y. Crawford thought that only through united effort on the part of the entire dental profession of the United States, could anything be accomplished. That the meeting of the National Dental Association, at Omaha, in August next, would be the proper place to push this thing along. He had no doubt that, in the big crowd that would be assembled there, a thousand dollars could be raised.

On motion, Dr. Walker was appointed a committee of one to bring this matter before the National Association, the Southern Branch, as a body, obligating itself to be on hand and make it a success.

Crowning Badly Decayed Roots.

How to crown badly decayed roots and make a serviceable tooth is always an interesting question.

The following extracts are from a case reported by Dr. T. J. Mason in the *Indiana Dental Journal*:

The root was a left superior bicuspid overgrown with gum-tissue. With a lancet the gum was excised, the flow of blood checked with trichloroacetic acid. After cleansing the root-canal of debris, a small wooden screw was inserted in it, around which was packed gutta-percha. At a second sitting the gutta-percha about the head of the screw was removed, then the screw was taken out, and through the hole left by the screw through the gutta-percha, the root was filled. When the remaining gutta-percha was removed, exposing well the end of the root, an impression was taken with plaster in a previously made wax impression, so as to force the plaster well up around the root. After drying the impression and oiling it, a stick of warmed sealing wax, pointed, was forced into the

impression, forming a good model of the root-end; around this a good band was fitted and then soldered. The band was placed on the root, carefully removed, heated and the root-end imbedded in the stick of sealing-wax as deeply as it was intended to encircle the root. In the writer's own words it was finished as follows:

"The task of shaping the top of band and arranging a cap for the root to slip inside of band was now an easy matter. Having done this, the band was removed from the wax, and after cleansing it was replaced on the root, together with the cap, which was perforated to admit a dowel. Sealing the parts together with wax, they were removed, imbedded in sand and plaster and soldered. After polishing, the extension was set upon the root with cement, leaving the exposed edge of the band over which to construct a gold crown, which was done in the usual manner. This piece of work, after five months' service, gives promise of a long period of usefulness."

Temporary Pivot Tooth.

It is often desirable to place temporary crowns on the roots of teeth while preparing for a bridge or Richmond crown or other like operation. An easy way to do this is to select a Bonwill crown as near the size and shade as possible. Grind off from the palatal side as much as interferes with the occlusion. Then cut an orange or hickory peg, one end being flattened to somewhat conform to the crown, the other end being round to fit the root, having the pin the right length it is placed in the root, but not very tightly. Now with the hole in the crown filled with cement, the same is slipped over the wooden pin and operation is complete. No cement has been put in the root; it only serves to hold the wood and crown together and can be done in less time than it would take to write this description. The only essential preparation for this work is having on hand the Bonwill crowns, which are cheap. A.

The Present Position of the Dental Profession.

From a paper by Dr. D. R. Stubblefield, read at the St. Augustine Meeting, February, 1898.

From being deprived by the narrow and intolerant skepticism that dominated even the best in other branches of knowledge and research, she has fairly gained the intelligent appreciation of the best and wisest in the world. From being denied the least association with the arrogant pretenders to all respectability, she has aspired and attained to equal merit and equal honor with all professions. Medicine * * has graciously deigned to allow the claim of blood-relationship to be announced unchallenged. Law * * has so far unbended that he calls upon expert exponents of this new profession to throw light upon obscurities. General Science * * has gravely acknowledged that this young claimant has just right to a seat among the mighty. Dentistry has gained by merit alone, the respect and honor of an acknowledged equality with all who love the truth and seek it.

THE LITERATURE OF DENTISTRY.

It has been alleged that dentistry has been unable to develop a literature worthy of her name and fame. Is this true? My own opinion is that our literature is all right, that it is as good as her nature and relation to the world at present will permit. * * The nature and essence of dentistry limits its literature, as well as its work. The greatest stumbling block in the way of social recognition, so to speak, by the allied professions was, that it demanded of its followers *manual labor*. * * This cannot be denied, because it imbues in the nature of our calling. There may be cotton-picking machines, and type-setting machines, but there will never be tooth-filling machines that do not stand on human feet and in human hands. This manual part being a vital portion of our calling, we must expect it to limit us somewhere, somehow; it must exert an in-

fluence upon our literature. The *abstract* can only be comprehended by the highest intelligence, while it must be confessed that the average of our specialty is not highly cultivated in mind. *Illustration* is a universal language and reaches the average intelligence. We appreciate what we see better than what we hear, and better than all, what we both see and hear at the same time. For this reason the necessity for demonstrators in our schools, and for illustrations in our literature.

In the second place, only money making enterprises can publish journals requiring new and original illustrations. It takes money, and lots of it. Who of the profession is able to do it? What dentist has the purse of Fortunatus, and the heart of an Atkinson? They do not consort together. Therefore, it devolves upon the money-making concerns interested in the profession, and I, for one, think we ought to hold up their hands, yield our willing gratitude and, as far as possible, back their enterprises cordially.

In the third place, the journals gladly print what the profession utters, when it bears the signs of honest conviction, and is new enough to take. If you want better, write it yourselves, and contribute it. The greatest trouble is, the publications call for bread, and you give them a stone. You expect brick, but you give them no straw.

To Devitalize the Pulp.

It often happens that the pulp is exposed on the distal surface of a second molar and is exceedingly difficult to reach with the devitalizing agent without endangering the gum tissue. In such cases it is expedient to drill a hole in the crown of the tooth sufficiently deep to hold the medicament and the protecting plug; then place the same accordingly. The result will be found very satisfactory, although it may sometimes require two applications. A.

Dental Literature.

From a paper by Dr. W. E. Wiber, Washington, D. C., read at the St. Augustine Meeting.

The growth of dental literature has been proportionate to that of the art and science it represents. From a crude beginning, when material was meagerly supplied, when dental societies were in their infancy, when the majority of operators jealously guarded the knowledge they had obtained—our literature has risen to a stage which makes it an indispensable and potent factor in the elevation of the profession. A marked feature of the literature of the past year was its high standard of quality. The higher average of dental education, and the higher standard of admittance to our colleges, has had, and will have, a marked influence on the quality of dental literature. The department of Society Proceedings is an important feature, whose possibilities can hardly be overestimated. Important discoveries, and the results of individual research, are usually presented to the profession first, through local or State societies, thence by their merit, finding their way to the press to be read by thousands of dentists. The exigencies of a dental practice demands that we read and study daily to keep up with the rapid advances in our profession, and there is not an issue of any journal but which contains, somewhere in its pages, a hint or suggestion, that is worth more than the cost of a yearly subscription.

The publication of college journals is a step in the right direction, subserving to the development of the young mind in the arts of observing, thinking and writing. The dental text-books published during the past year fully met in quality, what they lacked in numbers. These works should be in the hands of every member of our profession. It is a lamentable fact that there still remains, unsold, on the publishers' shelves, a large portion of the first edition of some of the most valuable text-books yet published.

It has been intimated that the colleges are not sufficiently exacting in requiring the possession of the standard text-books by their matriculants, who are certainly not properly equipped without them. We believe it is only necessary to bring this evil to the notice of proper authorities to have it corrected.

Restoring Gum Tissue.

Many are very skeptical about permanent results of gum restoration, and some very clumsy appliances have been put forward to do the work. Here is the way Dr. Harlan says he has accomplished it, but we can't help feeling that the good fellow was a little shy when he sent it forth. He says:

"I have found in trying to restore gum tissue, where it was uniformly wasted away around the necks of teeth, that if we take a tolerably stout silk thread and wax it well, tie it firmly around the teeth and leave it there, it will cause a degree of irritation that will have the gum tissue come up and go beyond the ligature, so that by watching it carefully, and keeping the mouth clean, we will be able to produce uniformly a pretty good margin of gum, and afterward care for it antiseptically after the ligature is taken off, and we will find in some of those 'symmetrical wastings' that the necks will be very well covered. In other cases I have found that by loosening the gum tissue around the surfaces of the root and making transverse cuts in the gums at regular intervals I could force it down."

Will some one, who makes it, please tell a reader of the WEEKLY how he makes temporary stopping material. I do not want a copied recipe, but one actually in use.

READER.

The *Medical Age* says that a Toronto woman, over sixty years of age, gave birth recently to a baby girl.

THE American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

EDITORS AND PROPRIETORS:

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription \$2.00 per year; \$1.00 for six months—including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, March 17, 1898.

Trigeminous Reflexes.

Abstract from a paper read by H. H. Johnson, D.D.S., before the Southern Dental Association at St. Augustine, Fla.

The trigeminous nerve and its branches is the most important plexus of nerves in the body. To the dentist it is *all-important* because there is not a nerve disorder coming under our specialty that this nerve is not directly involved.

From the variety of functions it has to perform, the intricacy and complexity of its connections and distributions, reflexes difficult of diagnosis, are more often met with in the territory of its ramifications than in any other.

Through some false connections in the wires the message has been switched off and carried to a wrong destination, and there is nothing to lead our minds in determining the source of origin of the impression, no way of retracing the nerve current to the

central office and from thence to the point of irritation.

How often are we called upon to relieve odontalgia manifested in a superior tooth when its real source of origin is irritation of an inferior one, or *vice versa*; or, as is frequently the case, the pain may not be referred to a tooth at all, but may assume a neuralgic character and manifest itself in some other locality, as the eye, ear, nose, or in the infra, or supraorbital regions; evidences of pathological reflexes, but of a meaningless and purposeless kind, having no reference to the seat of trouble, although it is often met with in other teeth. The third superior molars are the most frequent source of reflexed dental neurosis. This may be accounted for by the close proximity of the sphenopalatine ganglion, whose fibres anastomose with the fibres of other branches of the nerve, short-circuiting it, as it were, causing confusion of messages as when telephone wires are crossed.

Numerous interesting cases may be cited under this head illustrating this curious action of the nerves in disease.

Case 1, a gentleman, lawyer by profession, had been treated for ten days for a severe neuralgia centered in the region of the left temple. No pain of any character had been felt in his teeth. Through desperation he came to me hoping that the trouble might be located in his mouth. After careful examination a cavity was discovered in the posterior proximal surface of the second superior left upper molar, corresponding to the side of the head the pain had been centered in. The cavity was very difficult of access, having commenced at the gingival margin and extended upward towards the alveolar border. In attempting to explore it the probe slipped accidentally into the point of exposure. The patient involuntarily clasped his hand to his temple, saying: "That felt as if you had driven a nail into my brain right there." Mind you no pain was felt in the tooth. The nerve

was killed, the tooth filled, and every twinge of pain experienced during the treating and filling was felt in the TEMPLE and not in the tooth. No pain was ever felt after the operation.

Case 2, a married lady, about thirty-five years of age, had been treated by physicians for chronic neuralgia for several months. She had had no trouble in her teeth, but came hoping that something might be found to give relief. Both lower third molars were filled with cement on the buccal surface. Pains were not confined to any one side of the head or locality. Removed one of the fillings and destroyed the nerve, the pain ceased on *that* side. Being encouraged by this, removed the other filling and destroyed that nerve also. This completely cured the other side with no return of pains for over a year. She often speaks of her terrible agony of suffering and how easily I relieved her after the physicians had treated her so long. I may state that I found pulp nodules in both these teeth.

Case 3, a married lady, about thirty years of age, had been suffering intermittently with neuralgia of the left side of her face and head for several years. She had exceptionally fine teeth, none having ever required to be filled except some in front. Repeated examinations had not revealed the source of trouble. From hard brushing, the gum had receded some around the first upper molar left side. As the trouble was becoming quite annoying, I determined to try for pulp stones in this tooth. The nerve was accordingly killed, which proved very stubborn. Upon opening the pulp chamber, a layer of secondary dentine was found to have covered the entire floor of the chamber and almost cut off communication with the roots. The tooth was filled and relief followed immediately.

These three cases being a little dissimilar from the many every-day cases of dental reflexes of a pathological character, I have

reported them thinking they might be of some interest.

Case 4, Dr. Brubaker reported a case where a lady suffered extremely with toothache for several days after undergoing a surgical operation in the nasal cavity. Here is an instance of peripheral irritation in a part being referred to the nerves of the teeth.

Case 5, Dr. W. H. Morgan says, in years past, he had considerable practice among inmates of the Central Asylum of Tennessee. He reported a case in which the patient, a raving maniac, was cured by extracting offending teeth. Dr. Morgan says we have it in infancy when the deciduous teeth are making their appearance and from inability to control this action, is due a large proportion of infantile mortality during the second summer.

In the American System of Dentistry, pages 500 and 501, four very interesting cases of insanity are reported, caused by dental irritation. Showing very grave and interesting forms of trigeminous reflexes. These expressions from eminent men, as well as the few cases from my own personal experience, has been given to impress the fact upon my hearers and reading members of the profession, that this question is of serious importance and deserves more than passing notice. These evidences could be multiplied *ad infinitum*, but these few cases will suffice to call attention to the importance of the subject and open it up for discussion.

Some operators speak of removing the enamel from a tooth as easily as the removing of the bark from a tree. They speak of using enamel cleavers, etc., and seem to think it a simple matter to peel off the enamel. Dr. Johnson told nicely, in last week's issue, how he grinds it away, but where is the man with his cleavers who just shells it off in an off-hand, every-day way?

Warm Water.

We have often heard patients express agreeable surprise that warm water was used in the dental syringe instead of cold water. Why any one should inject cold water into a live tooth while excavating it, is not easily understood. The pain produced by such is often excruciating. There can be no excuse for using cold water, when it can be so easily warmed, and a supply kept warm during operating hours.

If the laboratory is supplied with gas, a Bunsen burner turned very low, with a vulcanizer jacket around it, and a vessel, a coffee pot if nothing else, placed on it, will keep an ample supply of water warm.

If there is no gas, an ordinary glass oil lamp, with a corrugated top chimney, on which a cup of water is placed, will heat the water. The cost is nothing.

This leads to a remark about receptacles for water on the operating table. Each patient should have a clean glass; those known as whiskey glasses are splendidly suited for the purpose.

We can never forget when we sat in a brother practitioner's chair and he injected into our mouth, from the same glass, water that he had been using from for other patients. He was exceedingly careful of his personal appearance and the cleanliness of his hands, but some of the nice little things he didn't seem to care for.

Reader, if you are using cold water for syringing out cavities, cease it and substitute warm water.

Are we, as a profession, ungrateful? Your attention is called to the article in this issue on the Chapin A. Harris memorial. Will a suitable monument ever be built? Is it not a fact that we are so full of conceit, we are not willing to accord superior merit to others, especially to the dead?

Mossbacks.

It is rather strange that with the number of dental periodicals and the number of dental societies, there should be mossbacks in the profession. A few days since a broken plate fell into our hands. It had been mended by a mossback who lived in Iowa. The ordinary office-boy of to-day would know better how to mend such a break.

A few years ago one of our graduating class came into our office. We were glad to see him, as it had been two decades since we met. As is usual with dentists, we began to talk about professional progress. Something caused the question to be asked, "How do you mend a broken rubber plate?" He said in the simplicity of a child, "By drilling and countersinking holes and making dovetails to hold the new rubber to the old." We, of course, showed him how and removed a little of the moss from his back. He had in his pocket a hollow handle hand-plugger, which he was endeavoring to patent, and which was as obsolete as he was ignorant.

If such men would attend dental meetings, watch the clinics, listen to the discussions, take some of the good journals, they would begin to feel the covering of moss on their backs, and would pursue a course that would remove the parasitic growth. It is quite difficult to interest them in society work, for when they do attend a meeting they find themselves so far behind in professional matters that they are ashamed to mix with the advanced; and for the societies to adapt themselves to their condition, they would have to go back years in experience and begin with a, b, c. If enough such men could be gathered together, it would be a school for the kindergarten teacher.

He who graduates now, unless he associates with his fellows and reads, will, in a short while, find the moss growing on his back.

Flux for Bridge Work.

The *Western Dental Journal* says the following is an exceedingly useful flux in bridge work:

Put in a cup—

Boracic acid.....	1 oz.
Ammonia.....	$\frac{1}{2}$ oz.
Carbonate of ammonia.....	46 gra.
Bicarbonate of soda.....	60 gra.
Water.....	4 oz.

Boil until the fumes of ammonia are no longer given off.

Coat the bridge or other work all over the gold with the flux. Heat it over a spirit lamp to dry it on. Give it another coat, if needed, leaving no part exposed. Then scrape off where it is desired that the solder shall flow, and it will go nowhere else. The work will come out of the heating as bright as when it went in, and the solder will be smooth. The polished surfaces will not be corroded or blackened.

Society Work.

The improvement of society work is never a closed question, but always open for debate. Here is an item from Dr. Bell, in *Dental Review*:

"There must be leaders in every society, but it appears to me that in order to promote the usefulness of our dental societies so that every member may be interested and benefited, each one should be willing to assist in some way; that committees should be appointed to introduce new comers, and make them feel that they are welcome, and needed, as they are, for new blood is the life of progress."

Nerve Paste Formula.

Dr. Chupein says a nerve will die under the following preparation as painlessly as an infant going to sleep. Equal parts of acetate of morphia, cocaine and arsenious acid, mixed on a slab, with carbolic acid. A fresh mix for each case.

Pulp Capping Material.

In the discussion on Operative Dentistry, at the St. Augustine meeting, Dr. L. G. Noel (Nashville, Tenn.) recommended the use of a hydronaphthol cement filling over a traumatically exposed pulp, in cases where there has been no peridental inflammation. The filling consists of one-third hydronaphthol powder to two-thirds of the powder of any good cement, mixed and used as usual, with cement fillings. This filling may also be used in cases of peridental inflammation, which yields within thirty-six to forty-eight hours to treatment with pure beech-wood creosote. He used the creosote quite liberally, first saturating the cavity walls and then sealing it in the cavity, on spunk or cotton, from one sitting to another. If the inflammation does not yield within forty-eight hours, arsenic is the only remedy.

Application of Nerve Paste.

Remove debris from about the exposure, wash out the cavity with warm water, dry out the cavity with an absorbent, put from the point of a small instrument, a very small part of nerve paste on the exposure, cover this with a small piece of cotton, and flow over this melted wax, which is done by placing a small piece of wax in the cavity and applying a hot instrument to it. After the cotton is thoroughly covered, melt enough wax in to fill the cavity. Base plate wax of wax and parafin is best.

For Opening Root Canals.

Do you use sulphuric acid fifty per cent. strong, for opening root canals? If not, begin at once. It is one of the most valuable additions to the dentist's armamentarium of late years. Use a Donaldson canal cleaner with it, and be careful not to use the same cleaner for the same purpose too often. The acid renders them brittle.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., MARCH 24, 1898.

NO. 28.

EROSION.

This disease, described by the observant Hunter as "decay by denudation," has been the source of many experiments and lengthy controversy. In spite of much investigation, its cause has remained a mystery, the various agencies assigned, amongst others, attrition by the tooth-brush, acidity of the gums, consumption of fruit, defective development, absorption, and caries tending to spontaneous cure by obliteration of the dentinal tubes, have all found their exponents, and have all failed to satisfactorily account for the various phenomena observed in this disease.—The editor of the *British Journal of Dental Science*.

But lately, Dr. Znamensky of the University of Moscow, has published a paper on the subject which is worthy of all attention, as it seems to satisfactorily explain the cause of this affection. We are all aware that dentine is composed of organic matter—tooth-cartilage—impregnated by earthy salts. In caries we have the inorganic salts attacked by acids, and the organic cartilaginous matter subsequently destroyed by micro-organisms. But according to Professor Znamensky, in erosion we have the tooth-cartilage first affected, the disappearance of the earthy salts being a secondary result. The process is, therefore, the reverse of that of caries. The investigator proceeded by removing the tooth-cartilage of extracted teeth by heating and boiling, and was able by prolonged boiling in a Papin digester to get rid of it entirely.

The result of the boiling was that the tooth became soft and could be easily scraped with a blunt knife, while at the same time it became very fragile and crumbly. If the boiling was prolonged at a high temperature, the tooth broke up. The enamel was not much changed; it became, however, more brittle. If a boiled tooth was brushed by a brush in a polishing lathe without powder, an artificial erosion could be produced, varying in rapidity with the temperature at which it had been boiled. The enamel strongly withstood the action of the brush, so that the dentine could be removed from under it, forming the undercut appearance so often noticed in the mouth. The microscopical appearance of the erosion also differed with the temperature. If the boiling was at a lower temperature the erosion was smooth, but the higher the temperature the rougher the surface became, thus agreeing with the varying microscopic appearances noted in natural erosion. The dentine also became translucent, also agreeing with the natural appearance of many erosions, and the enamel became more brittle and its adhesion to the dentine became weaker. From these experiments Professor Znamensky infers that the tooth-cartilage which binds the calcareous particles together becomes removed by boiling, and that the salts, becoming isolated, very easily fall away from each other, just as in a mixture of osteo and amalgam, as the cement becomes washed away the particles of amalgam become isolated and are easily broken off. A boiled tooth when placed

in an acid decalcifying solution is dissolved much more rapidly than one which has not undergone boiling, and the rapidity of decalcification varies with the temperature at which the tooth has been heated. Professor Znamensky also used dry heat by means of the blow-pipe, both directly on the tooth, and also when the latter was protected by a thin layer of plaster of Paris. He found that at the heated part the dentine swelled and the enamel peeled off, leaving an appearance very similar to the so-called atrophy of the crown. As the result of these experiments the investigator draws the conclusions that the tooth cartilage is the cement which joins intimately the granules of lime salts, and that the loss of this cement from any cause induces the mechanical falling off of the isolated granules, which would also be more easily attacked by any acid present. If this goes on slowly, a smooth, glossy surface is produced, but if quickly the surface is pitted, the pits corresponding to the bed of the individual granules. The sensitiveness of erosion cavities is explained by the theory that as the process of "dechondration" proceeds, the dental filaments with their tender protoplasm become exposed. This sensitiveness is greatest when the disease is in active progress, and passes away when the defect becomes stationary. Although the investigator thinks that the action of the tooth-brush, etc., does not cause the disease, yet he thinks the brushes, powders, and certain kinds of food modify the defects. He explains the fact that the teeth usually are affected on the labial surface, by the theory that the internal alveolar plate is much thicker than the external, its nutrition therefore is better, and consequently nutrition of the internal portion of the teeth is also better. When the disease is slow, the pulp being irritated by the exposed dental filaments forms secondary dentine and recedes, when on the contrary the disease progresses very rapidly, the new dentine has no time to develop and the pulp becomes exposed.

So far as we know, Professor Znamensky's experiments have not yet been confirmed or disputed by other investigators, but we have no doubt that before long we shall have on record the results of similar experiments. If erosion is due to loss of tooth-cartilage, it yet remains to be discovered why the teeth of certain persons are apt to lose this substance, and why certain animals, for instance, many of the seal tribe, are affected by this disease. We shall await further contributions toward the elucidation of the subject with much interest.

THE AGE OF GLITTER.

BY JOHN H. COYLE, D.D.S.

We see so many claims made for superiority of modern dentistry that one naturally seeks some explanation for this claim. Speaking for myself, while admitting without dispute that in many ways the profession of to-day is more fully equipped both practically and theoretically to meet the demands made upon it, especially in reference to restoration, yet from an esthetic point of view there is either a degeneracy or an abuse of the mechanical attainments made. Under the old system of dentistry, one of the very first considerations in operations on the teeth was to *preserve as far as possible natural appearances*. If a case of prosthesis, then the same principles were kept in view and the restoration was made with teeth that harmonized with complexion, age and other facial characteristics, so that at first glance the bald, naked truth did strike every eye. In filling the front teeth, separations were obtained by pressure and the cutting away of the palatine walls of the teeth, so that when they returned to their normal position only a close scrutiny would disclose the fact that they were filled. Dr. Atkinson gave an accurate description of this method of filling the front teeth, in a former number of the WEEKLY. With nine out of ten operators of to-day this is

all reversed. Great gaps are cut between the teeth, including extensive destruction of the labial walls, making an opening and a cavity which requires no sort of skill whatever to fill—only certain routine knowledge apertaining to the manipulation of gold and suitable methods and instruments for polishing. The result is, one can see the glitter afar off, before even the faces of the mutilated persons can be recognized. This is not all: fully one-half of the teeth so maltreated sooner or later lose their vitality through conductivity of so large a mass of metal required to replace the portions of tooth destroyed in preparation for such method of filling, become the cause of peri-dental inflammation and its concomitant, alveolar abscess. I have for the last two years been struck with this result of such methods of filling. Another instance is the growing abuse of the gold crown. It seems to be the custom in these days to slip a misfitting gold crown over all the bicus-pids and molars that are at all badly decayed. Nineteen out of twenty of these teeth could and would be filled by the older dentists and more certainly preserved than by the ill-fitting gold crown. The wind has been sown with these crowns with the resulting reaping of the whirlwind, for what busy dentist is not called on almost daily to extract one of these whilom *forever lasting* crowned teeth, which has become loosened and a source of irritation from suppurative inflammation, induced by the misfitting crown?

So, the upshot of my meditations has convinced me that after all we are a little too boastful in our claims for modern dentistry.

The sum of our knowledge is wider and greater, while our facilities are immeasurably beyond that possessed by the older dentists, yet with it all we are bringing about a state of things which to my mind is not at all desirable, viz.: the Age of Glitter.

The Operating Table—An Aseptic Cover—Sterilization.

In the discussion of Hygiene and Bacteriology, Dr. W. E. Walker described an aseptic cover for the bracket table or "float," which he is using with great satisfaction. It is simply a square of rubber dam, which is removed with the instruments used for each patient, and sterilized by boiling for five minutes in water to which a little bicarbonate of soda has been added. The soda prevents the instruments from rusting and also raises the temperature of boiling water, thus increasing its efficacy as a germicide. The rubber dam is not injured in any way, by repeated boilings, a sample shown which had been boiled, as a test, thirty-two times for five minutes and over, when forgotten boiled for half an hour, being as elastic and strong as a new piece of rubber dam. The color is agreeable and does not reflect the light; it is noiseless when instruments are dropped upon it, and does not absorb the warmth as does a glass top; it is not injured by acids as is the felt or linen cover, and being boiled with each set of instruments used obviates the great danger of contamination from laying instruments promiscuously over a felt cover. Dr. Walker also described a simple, inexpensive apparatus for sterilizing the rubber-dam cover and instruments. It consists merely of an ordinary flat-bottomed "agate-iron ware" pot with a cover, in which is placed a "cream-cheese mould"—a tin vessel with perforated bottom and sides, having little knob-like legs to raise it from the bottom of the pot. (In localities where "cream-cheese" is an *unknown quantity*, such a vessel can be made by any ordinary tin-smith).

The instruments having been first mechanically cleansed of any debris, are placed in the perforated tin vessel, which is then immersed in the boiling soda-water. Even the hand-pieces are boiled in this way, and

after shaking the water from them laid in a vessel of alcohol for ten minutes. They are then not only sterilized but they are thoroughly cleansed from all gumminess and work like new instruments.. In the automatic hand-piece the little click of the delicate machinery is heard distinctly.

For sterilizing the hands with minimum loss of time after each operation, Dr. Walker has adopted the following plan: A small quantity of a very good article of soap is reduced to a jelly by grating finely and digesting in water. Very little of this jelly upon the damp hands makes an almost instantaneous lather, to which is added a pinch of the best mustard powder, such as is used for culinary purposes. It takes but a moment to cover the hands with a pale-yellow, creamy lather, which is readily rinsed off, imparting a not unpleasant odor. It cleanses and sterilizes perfectly, leaving the hands feeling delightfully clean.

In view of recent statistics in regard to specific infection (see *Dental Review*, January, 1898), Dr. Walker, ably seconded by Dr. B. Holly Smith, emphasized very strongly the importance of thorough sterilization of the dental paraphernalia.

On the Road to Physical Ruin.

There is a world of truth in the following lines taken from an article by Dr. Beacock, in the *Ohio Dental Journal*. It is full of texts for many good sermons on health. More people die from over-feeding than from under-feeding. The writer says:

"Think for a moment of the appalling aggregate of over a thousand meals annually, at each one of them a small amount is consumed in excess of the systematic ability to digest, oxidize and assimilate; gradually the bowels become clogged, poisonous matter is reabsorbed, and neuralgia, headache, and low spirits intervene, the stomach being overburdened, it throws more work on the liver and it is unable to perform its functions properly, then it throws the extra work on

the kidneys, and now they soon become deranged, and lastly the heart over-taxed, by redoubled efforts in pumping the blood through these organs, thus engorged and partially disabled. There results low spirits and a form of insanity termed melancholia, all caused by faulty metabolism and malnutrition. All substances remaining in the stomach undigested, ferment and act as toxic irritants, while the nerve centres hypersensitive from effects of heat, heave with the throes of terrible convulsions. Fermentation always prevents healthy digestion and assimilation, and soon the mucous surface-become so paralyzed that they lose their normal selective power, as usually displayed in health. These poisonous products and acid forming plants then begin to be taken up, and a partial paralysis of the surrounding parts affected. This brings about a dilated state of the blood-vessels, and stasis in them, the outcome of which is a peculiar hyper-nutrition, by virtue of which connective, and even epithelial tissue of a very low type are formed in excess. We need not be told that the weakest, most exposed, most abused and most used part or organ falls a victim, because the operative influence brings such part or organ into a state best fitted to take on diseased action."

Copies of the Georgia Dental Law.

Mr. Editor:

Please say to those interested that I have just received copies of the law regulating the practice of dentistry in Georgia, in printed form, and will be pleased to forward a copy to any one who will apply for it. If the applicant is a student in either of the Georgia colleges he will be furnished by the dean of his college, who will be supplied within a few days. Very truly,

D. D. ATKINSON, D.D.S.,

Brunswick, Ga.

Secretary.

A case is reported where a child, two years old, fell and knocked out two upper incisors. They were replaced and did well.

Discussion of Dr. Johnson's Paper on Trigeminal Reflexes, at the Meeting of the Southern Dental Association.

In the discussion of Dr. H. H. Johnson's paper on Trigeminal Reflexes, see p. 337, Dr. J. Y. Crawford said that in no department is there so pronounced an exhibition of reflex action as in the domain of dental surgery, in the field which belongs to us. Is there a dental surgeon present who has not seen the patient place the finger upon the second bicuspid when the seat of pain was in the third molar? What is reflex action? In the fewest words it is when an injury to one part exerts an abnormal influence in another. We all recognize that the eye is involved in common with the tooth, this rarely occurs, however, after the destruction of the pulp.

The eye is the first part in the organism to be thus involved, the tissues involved in the structure of the eyeball, however, have comparative immunity from the effects of diseased teeth. Reflex action is most frequently exhibited in connection with the teeth, in the eye, the ear, the temporal region, the superior and inferior orbital regions, the cranium, the neck, the shoulder, the bronchial region and in the thoracic cavity. The responsibility for the manifestations of reflex action in these directions rests with the dental profession, with whom rests the possibility of more mistakes, more calamitous mistakes, than any other class of men. There are countless instances of diseased and calamitous illness as the result of ill-judged dental services rendered.

Dr. Walker expressed surprise that Dr. Crawford should make an exception of the tissues in the structure of the eyeball, in reflex neurosis from the trigeminal, the lenticular or ophthalmic ganglion having two roots, from one of which arise the ciliary nerves distributed to the ciliary muscles and iris as very beautifully shown

in the illustrations of Gray's Anatomy, '97 edition. It is also known that blindness has been cured by the extraction of diseased teeth.

Dr. Chapple called attention to the fact that Prof. Garretson made the broad proposition that nine-tenths of all neuralgias and other diseases of the human head are due to diseased teeth, the eye not being excepted. He related the case of a lady who suffered from severe pain in front of the left ear. Local treatment not affording relief, she was sent by her physician to him for examination of the teeth. The molars were found to have beautiful gold fillings, and as a last resort one of the apparently perfect fillings was removed and the pulp found to be in a dying condition. Removal of the diseased pulp afforded immediate relief from the excruciating pain in front of the ear.

Dr. B. Holly Smith spoke of numerous cases which had fallen under his observation, of persons of neurotic tendency in whom the climax had been developed in connection with diseased teeth. He cited several cases of recurring insanity coincident with an erupting wisdom tooth, with exposure of the pulp of a tooth, as the result of an oxyphosphate filling in close proximity to the pulp. In each of the cases cited return to sound mentality followed the cure of the dental disease.

Dr. Frank Woodbury, of Halifax, N. S., cited a similar case. As long as the teeth of this patient were in good condition his mind was sound, but when from negligence a nerve became exposed he became insane, with restoration to mental health after treatment of the teeth. He said: "There is no doubt as to the connection between the condition of the teeth and of the mind, in these cases, and I have no doubt but that the services of the dental surgeon would restore many of the inmates of our insane asylums to their families.

Dr. E. P. Beadles said that he could only account for the indifference to this very important matter by the fact that the medical

profession, as a rule, do not regard the teeth as having anything whatever to do with the rest of the human system. Even in obstinate cases of dyspepsia, etc., it is rarely that the condition of the masticating organ is looked into.

Dr. T. P. Hinman expressed the opinion that tissues which are associated in their development are also associated in diseased conditions. He instanced the development of the teeth and the internal ear, and cited the case of a young man who was suffering from toothache, and also an abscess in the ear. Coincident with removal of exposed pulps in the inferior molars there was no further trouble from the abscessed ear.

Dr. H. H. Johnson in closing the discussion of this paper, spoke of the great importance in the interest of humanity, in view of these facts, of securing the services of dental surgeons for the unfortunate inmates of our insane asylums.

Hygiene.

From a paper read at the St. Augustine Meeting by Dr. S. W. Foster, Atlanta, Ga.

Hygiene, that branch of science which has for its consideration the preservation of health, includes in its broad sense the study of all conditions relative to the development, growth and preservation of the individual.

Hence it presents itself under a two-fold aspect—the prevention of disease, and the removal of the cause.

Oral hygiene involves the principles which fill our life-work. Hygiene of the oral cavity begins with embryonic development, with the formation of the dental follicle and the development of tooth structure. The teeth which are the first to decay are those which are imperfectly developed. Hence, the first and most important consideration is the nutritive supply—abundance of tooth-building material. In connection with proper nutrition, there must be sufficient physical exercise to maintain the

organs of the body in a healthy state of action, and to secure sound sleep, for it is during the hours of sleep that we have the most active assimilation of nutrition and restoration of the general organism.

Next to nutrition is cleanliness. Tooth decay is a chemico-parasitical process. The acids which effect the decalcification of the tooth are generated by fermentation, principally of starchy or saccharine substances lodging around and about the teeth. Hence, the adage, clean teeth never decay, and the importance of the brush, the dentifrice and above all, the silk floss passed between the teeth. Of special importance is the hygiene of children's mouths as a factor in the development of the permanent teeth. In all operative procedures, hygienic conditions must be borne in mind. In proximal fillings special regard must be paid to the interproximal space. With flat surfaces, and V-shaped spaces, are associated gingivitis and the development of Rigg's disease, and ultimately loss of the organs. Ill-fitting crowns or bridges may become incubators for putrefactive developments. Without proper hygienic precautions, the services of the dentist may prove a detriment, rather than a benefit to the patient.

Bacteriology and Oral Hygiene.

From paper read by Dr. A. K. Fort, Atlanta, Ga.

It is a matter of reproach to the profession that we do not know more of the organisms to whose work we owe our occupation as dentists. We have begun at the wrong end, in our treatment of dental lesions, seeking by mechanical means to replace lost tissue, instead of striking at the cause and endeavoring to prevent the loss. Why should we not battle against the causal factors of caries as the sanitarian battles against the causes of infective diseases? The human mouth was the incubator of the first bacteria ever studied by *Lenwenhoch*, over 200 years ago, and yet, we do not now know much more about the oral bacteria than he did.

Bacteriological investigation has taught us what little we know of antiseptic treatment, but investigations of this kind have been left almost entirely to the medical profession. We need more Millers, Blacks and Williams.

In our journals we see pages on pages in regard to filling teeth, but when do we see anything pertaining to the prophylactic treatment of caries? We see the teeth of school children going to pieces for want of proper care, and what do we do? Introduce some cement filling, and tell them to call again in four or six months, instead of *demanding* in a voice of thunder, that ORAL HYGIENE be taught in our schools.

If we ever succeed in preventing caries, it will be due to bacteriological investigation. How can we hope to successfully cope with a diseased condition unless we thoroughly understand its casual factor?

Dead teeth are the most trying things we have to contend with. Why? Because of the exceptional opportunity offered of pushing millions of bacteria through the apical foramen. The injunction, "Do not take cold in this tooth," after the apical space has been crowded with bacteria, will not even serve the charlatan longer. One of two things must go: Abscesses following operations in root canals, or our reputations as dentists. Which shall it be?

I appeal for more thought and investigation on this subject, feeling confident that the greatest triumph of dentistry, if we achieve a triumph at all, will be in the Prophylactic, not the Restorative Method.

New York Correspondence.

The February meeting of the First District Dental Society was noteworthy because Miss Martha Smith was permitted to speak before that society. It is not so many years ago that any effort to gain admittance for women was tabooed and the only one who ever gained membership was always spoken of as "our one girl member."

The story goes that it was not discovered until too late that "Olga" was a woman's name, the "power behind the throne thinking it was, of course, the name of a man!"

At the March meeting of same society, a paper by Dr. Eugene S. Talbot, of Chicago, on "Degeneracy in its Relation to Deformities of the Jaws and Irregularities of the Teeth" was read by the Secretary. Why is it that good men will promise papers—have their names appear on the announcements and then fail to appear but send their papers to be read by some one else? As there was no statement concerning the cause of Dr. Talbot's absence it is fair to presume that he had no good excuse. As is too often the case when the writer of a paper is not present—his contribution was not discussed at all.

The Central Dental Association of Northern New Jersey held its annual on the 21st of February. Dr. W. L. Fish, the president, presiding. By the way, he is captain of a gattling gun battery at Newark, N. J., and has all his men in readiness for any war with Spain or any other country.

His address was very felicitous, referring to the fact that this was the eighteenth anniversary, and for the first time in the history of the C. D. A. a lady was present—a sister practitioner—(again the woman question, you see). He spoke of it as being singular because there was but one of her, alluded to the fact that there were representatives of North, East, West and South present—from Chicago, Connecticut, Philadelphia, Baltimore, New York. He asked all to rise and join in a silent toast to "our American citizens who have gone to rest the past week—the crew of the Maine."

The mayor of the city of Newark, Hon. James Seymore, gave a resumé of the city of Newark's greatness.

Dr. Dwight L. Hubbard, Dean of the New York Dental School, envied the dentist the manipulative dexterity he acquires (Dr. Hubbard is an M. D.), and said: "Hon-

estly, if I had my life to live over I would be a dentist." He claimed that it was not only manual dexterity, but dexterity of the brain coupled therewith which enabled the dentist to succeed so well. He spoke at some length of the relation of teacher to student and student to people.

Dr. O. E. Houghton, President of the Second District Dental Society of New York, was introduced as an ex-alderman. He spoke of the reciprocal relations of the two societies.

Dr. Louis Ottoly, of Chicago, was the next speaker, and occupied his time speaking on Dental Laws, etc. He criticised the Illinois State Dental Law which he claimed does not cover the ground. At any rate is not enforced even in Chicago—claims that the examiners are appointed on political grounds.

Dr. Daniel Jones, of Connecticut, was the next, but most of his "thunder" was mild; we skipped it.

Dr. Ottolengué spoke on Independent Dental Journalism. Referred to endeavors to amend patent laws—spoke of uniform examinations in each State as a foolish proposition. Intimated that he would like to know who your correspondent is, because of our remarks concerning what he said at the annual of the Brooklyn Society.

F. L. Pembroke, the mayor of Asbury Park, N. J., was introduced. He promised to arrest any one who should interfere with the pleasure of the dentists while in annual session at Asbury Park. That was in reference to the regular summer meeting of the New Jersey State Dental Society which occurs on the third Wednesday in July, and Asbury Park is the regular place. This C. D. A. is virtually the monthly meeting of the New Jersey State, all of which was neatly referred to by the President of the State Society, Dr. John L. Crater.

Two gentlemen did not appear—Dr. Wm. Carr, of New York, and Dr. Crouse, of Chicago. Dr. Carr was too ill to be present,

but Dr. Crouse did not send any good excuse, and, as in Dr. Talbot's case, it seems to me that it is too bad to hold out such inducements, time after time, only to disappoint many.

At the February meeting of the "New York Institute of Stomatology," Dr. Charles Kimball demonstrated what is spoken of as the "Dunning" method of soft foil filling, showing by diagram, first how he would do it, and then filling a tooth held in a matrix in the hand.

Dr. S. C. G. Watkins spoke of his latest fad in antiseptics, "Tribromphenol," which he extolled to the skies. Next!

At the March meeting of the same society, Dr. Benj. Lord, one of our oldest practitioners, demonstrated his method of using soft foil, filling a tooth held in his fingers and not in a matrix. He showed several styles of instruments he had fashioned for just this kind of work. In a very loving tone he spoke of his foil shears as he was about using them, saying that he had used this one pair more than fifty years. Showed some tinfoil he had made twenty-five years ago, which was bright and clean. Claimed that there had never been any made like it since, except on one occasion.

The report of the committee on recent literature was remarkable in that portion of it which, referring to the recent discussions between Dr. Williams and Prof. Andrews, showed that their main differences arose in regard to nomenclature—that on general principles they agree!!

The Odontological Society began clinics with its February meeting. Dr. Gaylord, of New Haven, and Dr. Hodgson, of New York, being the clinicians. Dr. Hodgson demonstrated the beauties of a little matrix for amalgam fillings.

The meeting for this week was very interesting. Dr. Harlan, of Chicago, being the essayist, and Dr. Harlan, Dr. Delos Palmer and Dr. St. George Elliott being the clinicians.

"METROPOLITAN."

THE
American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

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Subscription \$2.00 per year; \$1.00 for six months—including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, March 24, 1898.

Appointment of Dentists to Lunatic Asylums.

Four years ago, the following resolution was offered by the undersigned, and passed unanimously by the Georgia State Dental Society:

WHEREAS, There are about two thousand, more or less, inmates of the Georgia Lunatic Asylum, shut up from the outside world without a possibility of obtaining proper dental services; and,

WHEREAS, That inasmuch as the affections of the teeth, as well as coherent diseases, wear on the nervous system, producing irritation that is decidedly detrimental to the comfort, welfare or recovery of the patient; therefore be it,

Resolved, That it is the sense of the Georgia State Dental Society, that the appointment of a dental surgeon to the Georgia Lunatic Asylum for the relief and comfort of the helpless inmates, and the preserva-

tion of their teeth, would be a humane and Christian act, and that this society urgently recommends the same.

It was further resolved that the president appoint a committee to urge the trustees to recommend the appointment. Dr. C. V. Rosser, in discussing the subject, said, dentistry has advanced rapidly to the front, but if we succeed in accomplishing the ends purposed by this resolution, we shall have done more in this one stride for the benefit of our fellow beings than could be accomplished by any other means in a life time. It is well known that the agonies suffered, which we alone can relieve, are a great aggravation to the nervous condition of the inmates.

Dr. W. H. Morgan said he hoped this resolution would pass without a dissenting voice. In years past he had had considerable practice among the inmates of the Central Asylum of Tennessee, and his attention was drawn to the special condition of the teeth in connection with insanity. He cited a case of insanity caused by reflex neurosis.

At the recent meeting of the Southern Branch of the National held at St. Augustine, Fla., in discussing a paper on Reflex Neurosis, Dr. B. Holly Smith cited two very interesting cases of insanity caused by dental troubles, which he succeeded in permanently relieving by proper treatment.

Dr. Frank Woodbury, of Halifax, Nova Scotia, also described an interesting case of insanity caused by dental irritation which had come under his observation. He succeeded in promptly relieving the patient by proper treatment, although the patient was perfectly insane.

Many other interesting cases could have been cited at that time by the members present, but owing to the great press of business, the subject had to be passed hurriedly.

A case has recently developed in Macon, Ga., which it will be in order to mention here.

A young lady visited a dentist to have a badly decayed tooth attended to. The dentist applied something to the nerve and in a short time she became perfectly insane and has continued so up to the present time. No effort has been made to relieve the trouble by proper dental treatment, and in all probability she will go to the asylum as soon as a place can be provided for her.

These and hundreds of other cases which could be cited are facts beyond dispute, which go to prove absolutely that dental irritation not only aggravates neurotic troubles, but can and does produce insanity itself. But beside the humanitarian side of the question, which all must admit; and besides the fact that a few cases can be relieved or permanently cured by proper dental treatment, a dentist should be appointed to these institutions for the purpose of aiding and co-operating with medicine in scientific investigation in neurotic diseases.

The dental profession should take up this subject and give it the attention its importance demands. We hope it will be done, and that before long an appointee will be in every asylum, working harmoniously with medicine in deep scientific research for the relief of unfortunate humanity.

H. H. JOHNSON.

A Credit.

The article in last week's issue of *THE WEEKLY*, by Dr. W. E. Walker, on Making Vulcanite Plates, should have been credited to *Pluggers Points*, the bright college journal of the Southern Dental College.

Dentine Obtundent.

Sulphate of zinc is said to be a much better obtundent than the chloride. It does not cause the pain.

In our esteemed New York correspondent's letter, in this issue, Dr. Lord is mentioned as showing a pair of foil shears that he has used for fifty years. What a world of thought. Suppose those shears could tell the history of their office career!

Protecting Gums — Pulp Canal Question—Dr. Weaver's Article —Dr. Barrett and Cane Sugar—Machine-made Fillings, Etc.

What do you think of this little method of protecting the gingivæ in interdental spaces, while applying dressings to pulps in treatment for devitalization, to prevent "weeping" from those spaces which often is so profuse as to be uncontrollable when an amalgam or other filling is about to be inserted, thus jeopardizing good results in that character of cases where the dam cannot be forced far enough over root of tooth to keep cavity absolutely free from moisture, or where the napkin is used? The cavity may be kept dry by flowing chloro-percha over both gum and cervical portion of cavity and into the base of cavity, if it is deemed necessary to use that material as an insulating protector for the pulp. No misgivings need be entertained as to the policy of allowing such a thin film of gutta-percha (for that is all it results in, after chloroform has evaporated) to remain exposed at or below the gingival margin, if dryness of the cavity has been attained by its use.

There must always be conflict of opinion in all matter, we know, but, the management of the pulp canal question, of all dental subjects, seems to have engrossed more time and attention than any other theme, and the various methods of procedure—the positive one, where the utmost nicety of manipulation and antiseptic measures are adopted and the careless procedure where the inference is given that it is not necessary to remove all pulp canal contents, nor to be too scrupulous in the insertion of the materials that are likely to insure immunity from future distress. If the apical end of the root is not reached by the filling, that is of trivial consequence—so some say. But such an argument might just as readily be advanced in asserting that it is not

necessary to insert a filling in the cavity of a tooth with precision, nor to remove *all* the calicular deposits in an attempt to control pyorrhea alveolaris. Positive results can only be obtained or expected in proportion only as the successive steps in each operation have been accomplished positively. There is not a known remedy in our armamentarium that is unlimited or eternal in its action, and which is at the same time non-irritating.

The general impression is prevalent that if the apical end of the roots of teeth (diseased) were subject to thorough sealing so as to exclude septic infection from the ever resourceful blood serum, no fear need be entertained as to satisfactory results, even though the remainder of pulp canal be not filled. When the order of accomplishment has been reversed, what may we *not* expect, is the general impression.

Dr. Weaver's article on pulp mummification, in No. 19 of THE AMERICAN DENTAL WEEKLY, is certainly pseudo-scientific, and as has always been the experience of the "short-cut" brigade, "things are not 'always' what they seem."

Even Dr. Barrett is addicted to the overturning of old beliefs and has taken to eating cane sugar because it is absolutely unfermentable, before and after eating; and as to candies—if they are pure, "*they will be a preservative of the teeth and may be recommended for that purpose, provided ALWAYS that the teeth are properly cleaned after they have been taken.*" If they are a preservative of the teeth—why, cleanse them—of course, or at all, or—any old way.

Soon we may expect to hear from some other celebrity, of the old school, of course (reverence to it), that *machine-made fillings* have ruined more teeth, wasted more gold and reduced the honorable profession of dentistry to the profession of stomatology, or something else fearful.

LOUIS LEROY.

New York, March 12.

The Prostitution and Abasement of Dental Practice.

Abstract of a paper read at the St. Augustine Meeting of the Southern Dental Association.

In an able paper bearing the above title, that honored Nestor of the dental profession, Dr. W. W. H. Thackston, described in burning words as the climax of the prostitution of what should be an honored title, the degree of D.D.S., flaunted as an attraction in the gaudy advertisements of "dental parlors," of which the hired assistants and operators are *bona fide* GRADUATES OF DENTAL COLLEGES.

In the olden time the "cheap John" crept in almost by stealth—almost afraid to call himself a dentist; but now, heralded with printer's ink, upheld by personal impudence, strengthened by association with recreant GRADUATES, they are arrogant and defiant, and, it must be admitted, are achieving a startling success in the abasement of dentistry as a profession.

What shall we do? What means shall we adopt to checkmate the assaults being made upon the interests of dentistry as a science and a liberal profession?

The remedy lies within the control of our college faculties. Let the colleges be cautious and circumspect in matriculating students; let not one be graduated who does not give reasonable promise of a professional career unstained by dishonor or by moral or professional obliquity. As a rule our college faculties are composed of gentlemen of acute and clear perceptions; they are good judges of human character, and their opportunities for observation are ample for forming an estimate of character, as well as of qualifications for practice. Let it be made a requirement that every aspirant for a diploma should, before receiving the same, sign a pledge, to be attested by the dean or president and filed in the archives of the school, that he will faithfully observe and honor the "Code of Ethics" adopted by the National Dental Association and by all rep-

utable schools, and that in default thereof he shall surrender his diploma to the school from which it was received, and have his degree revoked by publication in the annual announcements of his alma mater and in the secular press of his place of residence.

With the co-operation of the examining boards of the different States, in informing the faculties of the schools of any lapse or disregard of the graduating pledge, this would strike at the root of the evil, for it is the recreant graduates and degree-men who are giving some degree of respectability to the "dental parlors." The "cheap John," of and by himself, would cut but a sorry figure; but with a diploma conspicuously displayed to the gaze of all in want of "painless dentistry" at the lowest rates—well, the copartnership is a financial success. Let the brakes be put on and set hard upon the traitorous graduates of the dental colleges.

Board Meeting.

The Board of Dental Examiners of Georgia will meet in Atlanta on the 28th inst., in the State capitol, for the purpose of passing upon the qualifications of those desiring to enter upon the practice of dentistry in the State of Georgia.

This is the first meeting of the Board under the act of 1897, which law requires that the Board can examine only graduates of schools of dentistry whose terms and curriculum are equal to that of a majority of the schools of dentistry in the United States. It will be necessary for applicants to present their diplomas for examination and registration, excepting those who are vouched for by the faculties of the colleges from which they graduated. The license fee fixed by law is ten dollars, to be paid in advance, and is not to be returned if the applicant fails to pass.

JOHN H. COYLE,
Chairman.
D. D. ATKINSON,
Secretary.

Opening Pulp Canals.

There must be no fear or hesitation about cutting away dentine to open a pulp canal. In the six anterior teeth, the opening should be made with a drill, in the engine if preferable; and we usually prefer it. The opening must be made as large as the bulbous portion of the pulp. It is hazardous to a successful operation to attempt the removal of a pulp through a much smaller opening than the cavity it occupies. If there be a cavity in the side of one of these teeth, and it is not very extensive, it is better to drill directly into the canal than to attempt the removal of the pulp through the decayed opening. In molars the canals are usually constricted at the margin of the pulp chamber. To open them, it is not safe to use a drill, save for the palatal roots, but sulphuric acid instead, used on a Donaldson cleaner, which, with a slight motion in and out, will remove the *debris*. With ample room at the orifice of the canals, their contents can be removed without much danger of tearing the pulps to pieces.

Information Wanted.

Who is it in New York City that makes a paper gold plug finishing disk seemingly of graphite? Samples were sent us and the name and address of the party lost. Any information leading to the manufacturer will be appreciated by the AMERICAN DENTAL WEEKLY.

Soldering Block.

Fill a sheet iron dish, says Dr. Chupein, with equal parts of plaster, powdered kaolin, powdered asbestos and powdered charcoal, mix them thoroughly. If a handle is desired, rivet one to the pan before filling it.

Word has come from several sections asking, "Who is your New York correspondent?" We answer by saying that the AMERICAN DENTAL WEEKLY has the best correspondents of any who send out letters from the Metropolis.

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American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., MARCH 31, 1898.

NO. 29.

A HYGIENIC AND ESTHETIC CROWN.

From a paper read at the St. Augustine Meeting.

Dr. W. E. Walker described the following method of mounting a Logan crown, the result being satisfactory in every sense—hygienic, esthetic, easy to adjust, and with the least discomfort to the patient:

The end of the root is to be squared off and beveled a little beneath the gum at the labial aspect. The canal is reamed and a Logan crown selected with a periphery corresponding with that of the root. The crown is ground to a fair joint at the labial margin, and beveled upward to the lingual surface so as to leave a space of about the sixteenth of an inch between the porcelain and the root at the lingual margin, leaving a wedge-shaped space between porcelain and root, of which the apex is toward the labial aspect of the tooth. A circular groove is next cut in the end of the root between the canal and the periphery, in which is fitted a band of 22 k. 28 gage gold, made wide enough to project sufficiently from the groove to afford a good hold for removal. The band in position in the groove is scratch-marked all around at the level of the root end, and ground down even with the mark except at one or two points where tongues are left by which to remove the band from the groove. The band is then removed, the tongues ground off, and the band turned down on a thin piece of gold or platinum laid in the palm of the hand, which, if well annealed, will

adapt itself closely to the ground edge of the band when the latter is ground down upon it. The plate with band in position is then grasped with a delicate pair of tweezers, and with the addition of a little flux, solder and flame, the two are made one. The plate is then trimmed approximately to the size of the root, placed in position with the band entering the groove and the plate burnished to the face of the root, outlining the periphery and the mouth of the root-canal. The piece is again removed and the plate trimmed to the size and shape of the root periphery, as indicated by the burnishing, and a hole punched or drilled to admit the pin of the Logan crown previously prepared as described. A piece of 24 k. gold is next perforated for the passage of the Logan pin, and adapted closely to the beveled base of the porcelain. The pin is then surrounded by a mass of Parr's flux wax, the plate with the band placed on the root and re-burnished, and warmed by throwing a current of hot air on it. The porcelain with its gold plate in position, is next warmed and placed upon the root, the warmth causing the flux wax which now fills the wedge-shaped space to adhere to both plates so that when cooled all will come away together. When cool remove, trim away all surplus wax and invest, for which purpose Brown's "Investment Fiber" serves admirably. When mixed with alcohol, the latter can be ignited, drying out the investment while you get the solder ready. Removing the wax, 18 or 20 k. gold is then

flowed into the space between the two surfaces of gold. Polish the exposed surface of gold and set to place with cement or gutta-percha as preferred. This crown offers the advantage of a band for strength, but obviates the adaptation of a band to the outside of the root, the fitting of which is so difficult, disagreeable and even sometimes painful to the patient; the band is out of sight (no slang intended) and cannot irritate the tissues or cause recession of the gums

This crown combines the features of the inner band described by Dr. H. F. Maasch in 1888, the wedge-shaped section of gold used by Dr. Gordon White in mounting the Logan crown, with some features of the Hollinsworth method. But we were told many years ago that "there is nothing new under the sun." Its advantages are that it is hygienic, esthetic, strong and easy to construct and to adjust, giving the minimum amount of discomfort to the patient.

PECULIARITIES OF THE LEFT SIDE OF THE JAW.

In ninety-five per cent. of mouths there is more depression upon the left side of the upper jaw, in the region of the cuspid tooth, than upon the right. The alveolar process is shorter on the left side than upon the right, so that if the artificial teeth are set parallel with the jaw they will be short on that side.

In a majority of cases the lower teeth are higher and more prominent in the region of the cuspid tooth on the left side than on the right.

In very many cases the left side of the lower jaw is farther from the median line than the right side.

Operators assert there is more decay of the teeth on the left side of the mouth than on the right.

Who can give a tangible reason for these

conditions? So far as artificial dentures are concerned, they must all be taken into account.—DR. L. P. HASKELL, in *Ohio Dental Journal*.

From the above it is inferred that Dr. Haskell is speaking of edentulous alveolar processes.

This is a condition I have not before taken into consideration, but, granting its verity, I shall venture something "tangible" for the doctor. It is a well known principle in physiology that use strengthens any organ or part of the animal economy. The right arm is brought into play on all occasions where strength or skill is required; the right leg is called into play if either must be used in an extraordinary effort, as in kicking; consequently the muscles of the right side grow stronger than do those of the left. The miller carries the sack of grain on the right shoulder all because of the better development of the muscles on this side. It can therefore not be surprising, to find people masticating food on the right side more than on the left. Then, it must follow that the teeth, being used most on that side, will be more firm, that the bone in which they are set will become more dense, than where it is less used, and consequently will not be absorbed to as great an extent when the teeth are extracted; and in proportion as the alveolus of the left side is less dense than that of the right will the absorption be greater and the depression greater.

It is also a fact that teeth constantly used in mastication will not suffer from caries as do those which are not. Any operator can tell at a glance which side a person masticates on, from the healthy appearance of the teeth on that side, and this is particularly the case with persons who do not give their teeth the proper care.

I think the question of use and disuse will answer the five conditions named by Dr. Haskell, yet it is not the purpose of this article to treat of all of them in detail.

D. D. ATKINSON.

The Chemico-Metallic Method of Root-Canal Filling.

From a paper read at the St. Augustine meeting.

Dr E. W. Weld, of New York, read a paper descriptive of his method of filling root-canals by means of specially prepared metallic points, to which is applied a drop of a modified nitro-hydrochloric acid, the chemical action which takes place in the root-canal assuring asepsis. The lecture was illustrated with lantern slides and chemical experiments.

A communication on the subject of this method from Dr. J. V. Haller, Wytheville, Va., was read, followed by a general discussion of root-canal filling.

Dr. Haller expressed the opinion that the disinfection of root canals obtained by Dr. Weld's method was accomplished by the chlorine liberated within the canals, the dry chlorine gas combining with the hydrogen of water, and liberating oxygen, which does the work. If enough of the nitro-hydrochloric acid is employed to dissolve the metallic points, the excess of nitric acid acting upon the silver will throw down silver nitrate as a white precipitate by the chlorine. This may be sufficient in quantity to dissolve the tooth structure in a very short time, though this can only be ascertained by experiment.

In the discussion which followed Dr. J. Y. Crawford said that the slight subsequent soreness sometimes following root-canal filling was a factor in the favorable result, an infiltrating action which closes up the foramen, making it impervious. This being the case, he did not think there was anything to be feared from septic emanations from the tubuli, unless they were of sufficient force to uncork the foramen, or burst the tooth, which latter did sometimes occur. He does not consider the treatment of pulpless teeth the terrible bugbear it is made out to be, not more than five per cent. being lost as a general average, among the better class of practitioners.

Dr. L. G. Noel thinks that in the case of molars, a good artificial crown or well filled roots is better practice than a natural crown with a large filling, when the root-canals are small, tortuous and difficult of access, except by removal of the entire crown. In adopting this method, the tooth should be ground down to a good solid foundation, but the bottom of the pulp chamber should be left as nature has formed it.

"Temporary Stopping."

On page 336 (March 17th) AMERICAN DENTAL WEEKLY, "Reader" asks how to make temporary stopping.

As this material is the easiest to make of all the "plastics," and as dental students have been educated for many years in this regard, as well as in the making and testing of amalgam alloys, it seems strange, *first*, that such an inquiry should appear in the WEEKLY, and *second*, that the inquiry was not answered, as I well know it could have been, by some one of your well-informed editorial corps.

"Temporary stopping" is made from white wax, precipitated chalk, oxide of zinc, gutta percha, and vermillion; but as the last three components are found acceptably combined in red base-plate, this material is of course utilized.

On page 174a of "Plastics and Plastic Filling" will be found the recipe "actually in use" very largely and most acceptably in both this country and Europe:

R White wax. 1 dwt (full).
Red gutta percha base-plate 4 dwt.
Precipitated chalk 4 dwt.

In a small, porcelain-covered iron ladle melt the wax. When melted add to it the gutta percha base-plate, cut into small pieces; this must be *carefully* and *thoroughly* melted into a smooth, thick paste; then add the chalk and work all together by means of a pestle.

When mixed take a convenient sized portion, *not too hot*, and roll it into a ball be-

tween the palms of the hands; then placing the ball upon a smooth surface, as a porcelain slab or sheet of pasteboard, roll it gently into a stick by the fingers of an open hand; smoothly round the stick by rolling it with a flat piece of wood or plate of glass.

I would add that the admixture of chalk is, with a little practice, a very easy task, but that the *thorough* working of the warm mass in the ladle with the pestle is *very important*, as upon this depends entirely the toughness, homogeneity and *excellence* of the temporary stopping.

J. FOSTER FLAGG.

Entering the Antrum.

Professor Boenning, before a class in his college, says never extract a tooth to enter the antrum. He means, of course, unless it is a tooth that is causing antral trouble. In the acute form raise the periosteal flap over the bicuspid, he says, and with a drill make an opening above the tooth right into the abscess cavity, and be sure your opening is at least $\frac{1}{8}$ inch in diameter; and in chronic abscess make an opening by means of the surgical engine, just above the bicuspid, large enough for you to put your finger through into the antrum, to explore its cavity, discharge its contents, remove the diseased structures and their products, and enable you to cure your case. Do not be afraid to make a large opening. Do not think that it will not heal. The trouble is that it closes up too rapidly.

Ruts and Roads.

Don't run in the old ruts when you have reason to know that they are much worn and are not safe. Turn to the right or the left. Make a new road; the first track in it will lead others. Be a road builder and not a rut follower.

WEEDSPORT, N. Y., March 17, 1898.

Enclosed find \$1.00 for the AMERICAN DENTAL WEEKLY. I like it very much.

Yours truly, A. J. SPRAGUE.

TEAGUE'S HINTS.

Sandarac varnish is undoubtedly the best parting fluid now in use for separating a plaster cast from an impression, since it gives the former a most beautiful, smooth surface. The varnish should be kept in a glass-stoppered bottle, while the brush (a small, long-handled "marking brush") should be kept in another bottle filled with wood alcohol, stopped with a cork through which the handle should protrude.

In investing shell crowns for soldering, it is better to pack the interior with asbestos fiber first, as it is less liable to shrink away than the investing material, thus preventing "burnt holes" where the metal is unsupported.

The "Crown Metal" of the trade is a delusion. There is considerable more price to it than pure gold. It is best to make it by shrinking the desired thickness of gold and platinum together and rolling smooth through the mill.

A hand mallet and chisel used as a mallet and plugger, are more tolerable to a patient when "breaking into" a cavity, than the punching method.

A sandpaper disk, reinforced with a No. 31 soft rubber wheel on a screw-head mandrel, works nicely. Try it.

A hard rubber disk, charged with corundum, will cut still better if dipped in a mixture of glycerin and corundum flour.

A quick way of flasking is to mix enough plaster to fill the flask. Fill one half and put in the plaster cast on plate, shape the surrounding soft plaster so as to have no undercuts. Cover this filled half with a piece of tissue or bibulous paper, brush it over with soap-solution, put on the ring of the other half and fill up with the remaining plaster while yet soft and put on the top of the flask. It can be opened as readily as if two mixes had been made.

Circulars, almanacs, etc., in the paper

line, cut into squares, are useful to have in the drawer with extracting instruments, on which to put and with which to wrap up extracted teeth, and also to have at hand in the laboratory on which to place impressions, investments and the like to keep the plaster from sticking to the table or board.

Experience has impressed me that morphine and cocain are useless adjuncts to a nerve paste and tanning or embalming ingredients should be eliminated, as should also anything that coagulates albumin. We need in a paste, a mixture that will correct acidity, soothe pain, and devitalize; therefore the old-time formula has been found to be as efficient as is to be had, viz.:

Arsenic.....1 part.
Prepared chalk or.....
Calcined magnesia.....} 9 parts.
Oil of cloves sufficient to form a paste.	

Oil of cloves comes nearer to being a specific for toothache than any drug known. It is decidedly best to allow the nerve to slough and then use germicides, than to tan or embalm it and extract it with the attendant pain and shock to the patient.

Prevent Rubber Bands Slipping.

Here is a little point that may come in well for those who use rubber bands in regulating teeth; it is by Dr. Locke, in the *Ohio Dental Journal*. He says, to keep rubber bands from slipping up or down, tie a ligature around the neck of the tooth, place the band on, carry the ligature through the fissure of the crown, and tie it to the ligature on the opposite side of the tooth, thus holding the band both ways.

Creosotal.

It would be well for those who use creosote to try the preparation known as creosotal. It is an oleaginous substance, containing 90 per cent. of pure creosote, and is free from the nauseous odor and burning taste of the plain drug, which are so disagreeable to most people.

Oral Surgery.

From a paper read at the St. Augustine meeting.

Dr. W. E. Walker exhibited a sequestrum which embraced nearly the entire ramus. A first permanent molar which had abscessed in February, 1897, was extracted in April by a country physician; necrosis ensued. In February of the present year the sequestrum was removed through the sinus without much force.

Dr. Cowardin related the history of a somewhat similar case, but which followed the administration of three grains of calomel by the child's mother, without proper subsequent treatment; the bone was necrosed from the lateral incisor to the condyloid process.

Dr. B. Holly Smith spoke of the embarrassment of operating in a septic field in such cases. He thought it possible that in the case of the specimen exhibited there might have been aggravated stomatitis—cancerum oris.

Dr. Nall thought it looked like a sequel of diphtheria—the inflammation diffused under the periosteum.

Dr. Frank Holland thought that if the earlier history of the case could be known, it would be found that poultices had been used on the outside of the face.

Dr. Walker said that he was not familiar with the early history of the case, but when he saw it there was nothing like stomatitis, the tissues of the mouth were in fairly healthy condition and the child apparently healthy—not anemic. He spoke of the importance of sterilization in such operations, especially if, as had been suggested, it was a sequel of diphtheria.

Dr. B. Holly Smith related the case of a dentist who had contracted diphtheria inhaling particles from the chip-blower used for a patient who had been dismissed as cured two months before. She was wearing new garments, her hair had been sterilized, etc., and yet she communicated diphtheria to her dentist two months later.

Dr. Crawford was glad to see proper attention paid to the matter of sterilization. In case of a wounded finger he recommends wrapping tightly with a ribbon of bibulous paper and floss silk and immersing in alcohol. He believes that when alcohol is absorbed into the system, *pari passu* with the toxin, there is elaborated an antitoxin—something which annihilates toxic influences.

Dr. Walker covers all slight wounds of the fingers or abrasions of the skin with collodion, which affords protection and is not easily rubbed off.

Care of Hand-Pieces.

The following facts about hand-pieces, says the *Western Dental Journal*, are worth remembering:

The mechanism of hand-pieces and right angles is frequently rendered useless from excessive pressure arising from a desire to hasten the cutting operation and forcing the tools beyond their capacity. Many dentists hold on to their hand-burs until the edges of the leaves are entirely worn off, and then press on the hand-pieces or right angles so as to force the cutting, or even with new, sharp instruments they use double or triple the requisite pressure and thus damage things generally. The necessarily delicate mechanism of the hand-pieces and right angles will not successfully stand such treatment. The gearing of right angles, although made as strong and heavy as the space will permit, is nevertheless quite a weak affair, and should be used carefully and cautiously.

Alabama Meeting.

The 29th annual meeting of the Alabama State Dental Association will be held in the Exchange Hotel, Montgomery, Ala., April 12th to 16th, 1898. All members of the dental profession, in good standing, are cordially invited to attend. Fraternally,
W. J. REYNOLDS, Sec'y.

An Appreciated Letter.

CHICAGO, March 21, 1898.

To the Editor of the American Dental Weekly:

It is presumed that when I wrote you in the early stages of the development of the DENTAL WEEKLY, in answer to your request for an article, that I would "some day" send you one, you simply tossed the letter to the office "cat" and remarked, "There's the end of that."

But you see we are all likely to be mistaken at times—even editors—and so here I am at last. I may sometimes disgracefully delay a promise, but I seldom or never forget one, especially one made to an editor. And this calls to mind a compliment I must give the WEEKLY. When the dapper little aspirant tripped airily into my office one morning and gave me a jaunty salute, I must confess myself surprised. Then I was refreshed. Then I was dubious.

And why? I was refreshed because the WEEKLY brought with it a new atmosphere and a new tendency in dental journalism, and it interested me. Then I was dubious because I thought I knew something about editing a journal and just a trifle about publishing one; and it was difficult for me to see how any man or any body of men could keep up the pace set by the first few issues of the WEEKLY. To be frank with you, I fully expected to see it decline—or bust. But, bless you! the precious little rascal has laughed to scorn all my glum forebodings, and here it is week after week better than ever before. If a Monday morning came without a visit from my aggressive Southern friend I should feel that the week was somehow out of joint. I lunch over it every Monday noon, and I find myself with fewer "blue Mondays" on account of its coming.

The thing that most impresses me, that most compels my admiration, is the marvelous and sustained energy put into the work by yourself and staff. It has sometimes seemed to me that there was no other pursuit with such an element of persistent and

perpetual grind in it as editing; and to assume the burden of getting out a dental journal every week, with the grim necessity of securing something bright and original for each issue, such as has marked the course of the DENTAL WEEKLY from its inception—this is a task which none but the most courageous men would undertake. And in this brief word of greeting from Chicago I am sure I express the sentiments of a large number of your readers everywhere when I say a word of encouragement to you and the little band of editors who support you.

May you always have the brain and brawn to continue in the way you have started out, for it takes both mental and physical effort to carry on such an enterprise. May the profession appreciate what you are doing, and rally to your support in a way that shall assure the permanent success of the AMERICAN DENTAL WEEKLY.

I had intended making of this an article on some practical or scientific subject, but now that I have consumed so much of your space I must defer this till another time.

Yours with best wishes,

C. N. JOHNSON.

Nerve Paste.

The following is the formula of Dr. Du-bois, of Paris, and is said to act without causing pain. This statement, however, must be taken with some allowance, as the application of arsenious acid to a pulp in certain diseased conditions will cause pain. As we are seeking that formula which will cause the least pain in the majority of cases, we can but test this one. It is composed of—

Arsenious acid.....	5 parts.
Eserine.....	2 parts.
Cocain	2 parts.
Chloroform.....	q. s. to form a paste.

Dr. N. W. Kingsley, of New York, is reported to be dangerously ill. We hope for his recovery.

Cataphoresis.

From a paper read at the St. Augustine meeting.

Dr. H. H. Johnson read a brief, but eminently practical paper, on this subject. He disclaimed the possibility of writing any thing new at this time, cataphoresis having passed the experimental, and reached the thoroughly practical stage. With a good instrument, a suitable case, and proper application, satisfactory results must follow.

Disappointments can only result from ignorance of the laws governing electricity, and therefore, inability to select proper appliances or practicable cases. The essentials in the apparatus are a constant, steady current and a perfect current controller. A milliamperemeter, while not a necessity, is desirable, indicating the condition of the connections, the amount of current, whether too much, or too little, or none at all.

Complete insulation of the tooth is essential, the soft tissues of the mouth being a better conductor than the tooth, while moisture conducts it away, or may form a short current with a steel rubber dam clamp, for instance, producing pain.

Cavities which have been previously filled with cement or amalgam are apt to prove stubborn, the open ends of the tubuli of the dentine having been closed up. In these cases the surface of the cavity should be burred away or some solvent—as a weak acid—used previous to applying the current.

Where secondary deposits of dentine have taken place, or pulp nodules exist, satisfactory results are hard to obtain. Too high a potential coagulates the contents of the dentinal tubuli and the cocain salts become dammed up on the surface. If the negative pole is placed near the tooth and a mucous membrane, there will be less resistance. In bleaching, apply the negative electrode in the tooth, reversing the current.

There are undoubtedly dangers possible in the use of cataphoresis, but they come

only through ignorance and carelessness. If too much current is used, the flesh under the negative electrode may be burned. If the street current is used, a ground current may be made through the fountain spittoon, and unpleasant results follow. When there is leakage of the rubber dam, micro-organisms may be driven into the soft tissues by the force of the current, causing septic poisoning. Hence, the importance of bathing the gums with some good antiseptic solution previous to the operation.

To sum up. Cataphoresis is a success in producing anesthesia of the dentine or even of the pulp itself, when conditions are favorable; the favorable cases for perfect success are not more numerous than the reverse; when success is attained the time consumed is an item in a busy practice.

The Irrepressible.

Oh, he is a terror! Awake or asleep, his presence haunts you! Who? Why the fellow who meets you on the car, at lunch, at the theater, or the church, and insists upon talking shop, and in a tone of voice that can be heard a block. The burden of his song, and the fact which he wishes to make most prominent is—that he is so very busy—appointments a month ahead, he has no time to read, sleep or eat, etc., etc. And as time goes apace, in sunshine, rain, pestilence, war or famine, the song and the tune are the same.

The tax books, for some inexplicable reason, fail to corroborate his statement. You happen to know that he lives in a rented house and that his credit is not rated in Dun or Bradstreet at "A." But why does he talk so extravagantly? We can best make reply by recalling Carlyle's criticism of America. On his return from a visit to this country, he observed to some of his friends that "America was a republic of forty five million people, mostly fools."

J. A. C.

A Method of Making Gold Crowns.

A few weeks ago, while in Des Moines, Ia., I called at Dr. A. R. Begun's office and he demonstrated his method of making gold crowns, which, in my estimation, is the neatest and best method that I have ever seen.

The band is fitted to the root in the usual way, then the cap is struck up of pure gold, very thin; about 36 G.

At this point the cap may be fitted in the mouth, or an impression and bite may be taken and set up on the articulator.

The cap is fitted by placing it on the band and bending down the edges (which are left surrounding the cap proper) over the bands; then close the teeth or articulator and the opposing teeth form a perfect articulation on the soft, thin gold.

Remove from the mouth or articulator, twist binding wire around the band and cap to hold them in place and fill in with an abundance of 22 K. solder. Use plenty of solder to be sure, and have a good, heavy cap, and solder. He uses dry flux, holds the crown by the long ends of the wire and flows the solder by using a large flame from the blowpipe.

This may not be new or strange to most dentists, but I have always done all such things by holding in the flame of a bunsen burner and thought I had the most convenient way of doing it.

After finishing you will have a perfect fitting crown and the prettiest crown that you ever saw.

The overlapping edges of the cap will be filled with 22 K. solder, and if you have bent the overhanging edges down perfectly, the crown will be nicely contoured.

The same method of striking up caps for bridge teeth may be used, single and in series, for two or more teeth, by making a die for the whole space and stick up pure cusps and adjust in place over the facings backed up properly; invest and solder. Try it.

E. D. BROWER.

THE
American Dental Weekly
 ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Subscription \$2.00 per year; \$1.00 for six months—including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, March 31, 1898.

Quacks.

The individuals denominated quacks wear different garbs. Some so clothe themselves that even the world recognizes them as such; they are the professional quacks. Others try to hide their identity under a cloak of professional respectability; they are the quack professionals.

The professional quack can better be trusted than the quack professional, who is the quintessence of perfidy. Verily, the professional quack is a gentleman by the side of him. His is truly the whited sepulchre—fair without and foul within. He covers his ear-marks with his robe of self-righteousness and sits with the saints.

The editor of the *Atlantic Medical Weekly* says: "It is no longer the survival of the fittest—it is the survival of the cheekiest." Again: "The advertising quack" (the professional quack) "is not so harmful as the regular practitioner with dishonest prac-

tices." There is a world of truth in these two quotations. The harm the quack professional does the cause he is supposed to honor is far greater than that done by the plain, every-day, out-and-out professional quack, who makes no claims to professional decency and does not try to hide his ear-marks.

Tell Him So.

Some things are more appreciated than gold. This may sound strange to many ears, but it is a fact, nevertheless. And one of those things which an editor appreciates is just such a letter as we publish in this issue of the WEEKLY. We heard an address once, on the subject of "Tell Him So," and found it full of solid truth. Dr. Johnson is carrying out the teachings of that teacher. If the world were made simply on the basis of dollars and cents, every emotion of our nature would be chilled, civilization would wax into worse than barbarism.

That our efforts to furnish the profession with a weekly dental journal are appreciated, we have felt to be true, but when one who knows "tells him so," it makes sarcasm sink into insignificance, the place it properly belongs.

Serious Roentgen X-Ray Burn.

Dr. Tuttle, of New York, reports in the *Philadelphia Medical Journal* a serious X-ray burn. The knee was exposed to the rays. In about three weeks the skin sloughed off, and finally the leg was amputated.

What can be the reasons for such results from the Roentgen rays? Only two serious cases have been so far reported. There may be others, as this valuable means of diagnosis is used daily hundreds of times. The bad results reported so far are serious enough to cause carefulness in the use of this valuable discovery.

Transmission of Disease by the Mosquito.

The *New York Medical Journal* has a splendid article on this subject. The writer, Dr. Craig, seems to prove conclusively that this pestiferous insect carries disease—yellow fever particularly. The bill of the insect becomes covered with the blood of the fever patient upon whom it feasts, and dries thereon. After about forty eight hours the little pest is ready to plunge its pump into some one else, inoculating the healthy person with the germs of the disease.

Clinics at the Southern.

The clinics at the St. Augustine meeting presented some valuable features.

Dr. I. Simpson, of Rock Hill, S. C., demonstrated the possibility of keeping cervical cavities dry without rubber dam or clamp.

Dr. Frank Holland demonstrated the value of the Ivory No. 9 clamp as a gum retractor in the most difficult cases. He filled the cervical cavity with cohesive gold, using the electric mallet.

Dr. J. Y. Crawford removed cement fillings from two cavities in a second upper molar, finding a considerable amount of decay. He cut away the septum between the cavities, making one large cavity, which he filled with large mats of Abbe's No. 4 non-cohesive gold, first covering the bottom of the cavity with two mats of No. 4 tin-foil. The mats of gold-foil were allowed to extrude almost equal to the depth of the cavity. They were finally wedged, and thoroughly condensed by hand pressure, being finally burnished down and finished in the usual way.

Dr. L. M. Cowardin demonstrated cataphoresis, anesthetizing two very sensitive cavities. Dr. Cowardin fears that through electrolytic action upon the medicament, chemical deterioration of tooth structure will result, by the liberation of oxygen.

Dr. C. L. Alexander exhibited a number of original methods of making and mounting crowns, cast-fillings, etc

Dr. E. B. Marshall showed an original matrix, to be used with plastic fillings.

Dr. H. H. Johnson demonstrated a method of articulating gold crowns on molar teeth.

Dr. E. E. Cruzen, of Baltimore, presented an electric root-drier and a method of repairing broken porcelain faces in crown and bridge-work.

Mr. Wm. Pohlman exhibited his gold-plating solution for plating without battery, a method which commends itself for simplicity and rapidity.

The State Boards

Will now have another opportunity to pass upon the work of the colleges. Heretofore, in the Southern territory, the boards have shown a very liberal, conservative spirit, and the colleges have had no occasion for serious complaint. But this could not be otherwise in Dixie. "Live and let live" is a principle as deeply imbedded in the Southern heart as maternal affection is universal. No doubt the same liberal ideas are equally dominant among other boards, and we are not disposed to make invidious comparisons. We simply have had personal cognizance of the official conduct of the Southern boards, and hence we speak of what we know to be a fact.

A distinguished member of the Southern Branch of the National Dental Association said at St. Augustine that he knew of instances where the applicant for examination before certain boards was paralyzed with fear by the austere attitude and studied discourtesy of members of the board. "Under such circumstances the most thoroughly qualified and deserving were rendered *hors de combat*, and failed to pass."

We apprehend that the student or students in question, by his or their peculiar conduct, invited disrespect, and their fail-

ure to pass the board was attributable solely to *their own* "austere attitude and studied discourtesy."

The applicant for license should therefore remember that the members of the respective State boards are entitled to the highest respect and consideration, as they are the legal guardians of the profession and the public; and it is entirely safe to affirm that no applicant who deports himself with the proper bearing and makes the percentage required will have occasion to complain of an injustice done him. In rare, isolated instances, it is possible there are those who allow their prejudices to influence them, but as a rule there will always be found a majority who know no other law than "*Jus-titia omnibus*."

J. A. C.

Mossback No. 2.

The AMERICAN DENTAL WEEKLY speaks of mossbacks as men that do not always attend dental meetings. We also see an extract from our own State dental journal, from a member of the State Dental Examining Board, removing over-grown gum tissue of a bicuspid root with a lancet. It seems to me I see "moss" on that, as in these days of electrical appliances he could more easily have removed the offending tissue with electric cautery, and thus avoid all hemorrhage and have less subsequent soreness and less pain than where the almost obsolete lance "method" is resorted to, and followed up with "trichloracetic to check the flow of blood."

E. E. REESE, D.D.S.
Indianapolis, Ind.

Wanted.

Some old cameo dental instrument handles. Three-quarter or inch size preferred. Address John, care AMERICAN DENTAL WEEKLY.

The late Dr. Atkinson, of New York, was the first to use a hand mallet. This was in 1863.

The Chapin A. Harris Memorial.

The subject of a memorial to this great and good man was brought up and discussed at the meeting of the Southern at St. Augustine recently. A movement has been on foot for some time past working to this end, but somehow, the right kind of effort has not been put forth to accomplish results.

The Snowden & Cowman Dental Manufacturing Company, of Baltimore, have on hand a small nucleus, which was contributed some time ago, amounting perhaps to as much as two hundred and fifty dollars.

Surely, if this matter was brought before the profession in the right way, there would be no trouble whatever in procuring an amount sufficient to insure the procurement of a creditable memorial statue. We cannot believe the profession of America is so devoid of sentiment or appreciation that it would not contribute to this worthy cause, if the matter should be presented in a business-like manner. Dr. W. E. Walker, as a committee-man from the Southern Branch, will bring the matter before the National at Omaha, and we hope the subject will receive sufficient thought between now and then that some wise and definite action may be taken at that time.

It is a shame that the profession of America should have been so neglectful in honoring their noble dead.

H. H. J.

Place for Meeting.

The Tennessee Dental Association has selected Lookout Mountain as a place for meeting for six consecutive years. Is this not a good thing for most State associations to do? Our observation has been that the best meetings are those held, not in the cities, but at some resort where there are ample hotel accommodations. There is not, at such places, the attractions outside to divert the attention of members. And all being housed in one hotel renders the social features much more pleasant.

Some Hints on Crown and Bridge-work.

From a paper read at the St. Augustine meeting.

In a paper on Prosthetic Dentistry the writer, Dr. C. L. Alexander, emphasized the point that hygienic relations must be borne in mind as well as esthetic appearance. As preliminary to "crown and bridge-work" the gums must be restored to health, pulpless teeth treated and all cavities filled. When shell crowns are placed, there should be a perfect fit, extending well down under the gum margin, excluding the possibility of further decay. If porcelain facings are to be used, a band is not necessary; a ferrule can be formed by burnishing gold plate down over the root, which, when united to the crown proper, makes a very strong attachment. Cast abutments instead of open-face band attachments obviate a vulgar display of gold. Many failures and much clumsiness is due to having the gold for bands and caps too thick. For bands, Dr. Alexander uses coin gold rolled to 31 American standard gage—backings and cusps should be made of 24-k. gold rolled very thin, say 38 gage. For cast fillings and cast abutments for bridges use 24-k. gold rolled very thin, using 46 for the base and 38 for covering the wax contour. Never lose sight of the fact that the typical self-cleaning space will be appreciated by your patients from a hygienic standpoint and will add to the durability of the work.

A Timely Warning.

Dr. B. Holly Smith, at St. Augustine, mentioned an unusual and interesting case which came under his observation quite recently in Baltimore. Two months after recovering from an attack of diphtheria a young girl sought dental attention. The dentist rendering the service became shortly afterwards a victim of diphtheria. Dr. Smith was of the opinion that the diphtheritic germs

were present in the dental caries of the convalescent patient, and were inhaled by the operator as they were blown out by the air syringe.

This is a very reasonable, and indeed, rational deduction, and should serve as a warning to practitioners who are called upon by those of recent recovery from infectious disease.

J. A. C.

Dr. J. M. Mason Going to Texas.

Dr. J. M. Mason, who has for thirteen years practiced dentistry in Macon, Ga., has decided to make his future home in Fort Worth, Texas.

Dr. Mason was a member of the firm of W. R. Holmes & Mason, who has so long conducted the Macon Dental Depot, and edited and published the *Southern Dental Journal and Luminary*. Dr. Mason is a good citizen, and a progressive dentist. Georgia regretfully parts with him, and we most heartily commend him to the profession of Texas.

H. H. J.

Instrument Nomenclature.

From a paper by Dr. G. V. Black, M.D., D.D.S., read before the School of Dental Technics.

This is a plan set forth, by the author, for naming and classifying dental operating instruments. It is remarkably simple and correct, for the first attempt at such an arduous undertaking. Like the metric system, it will not be learned by the older members of the profession, but if adopted in the schools, it will in a few years, be quite commonly used.

DEAN DUNWOODY ATKINSON, D.D.S., is Mayor *pro tem.* of Brunswick. Surely that city is fortunate. It is a port of entry, and if Spain attempts an overt act while Dean Dunwoody Atkinson is Mayor they may look out for hot times.

Enclosed find check for the AMERICAN DENTAL WEEKLY. I cannot be without such a bright sheet.

H. B. NOBLE.

Washington, D. C.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., APRIL 7, 1898.

NO. 30.

BITE FOR ENTIRE ARTIFICIAL DENTURE.

There are some good, new and original ideas in the following practical remarks by Dr. C. M. Meade, taken from the *Indiana Dental Journal*:

"After a true impression has been obtained, coat it well with shellac or black ink, oil, and pour a model. When ready to separate, trim all the surplus plaster from the edges of the tray and hold the tray, with the impression and model intact, over a flame until it is well warmed. Then by gently tapping on the tray it will separate from the impression. Place the model and the impression in hot water for from a half to one and one-half minutes. This will enable you to separate 90 per cent. of cases.

Now, as the lower impression is easily broken across at the incisive region, dispense with it and in its stead make a bite-plate as follows: Place and burnish over the lower model a sheet of base-plate wax. This should be used first, as it is less likely to cause a fracture of the model than the use of a lead plate. Over this wax plate, usually about two layers of lead should be used. The best lead for this purpose is that procured in thin sheets from tea caddies. A thin film of wax should be spread over each piece of sheet lead before another sheet is put on. After each plate of lead is added, pass the model inverted over the flame and press the lead down carefully. In this way as rigid a bite-plate as is desired can be made. To the bite-plate add

a roll of beeswax or paraffin and trim to the proper height and width for the case in hand.

For the upper jaw I invariably use the plaster impression as a bite-plate, adding wax over the ridge the same as in lower case. I also flow considerable wax over the palatine surface of the impression. In case the upper impression cannot be removed intact, cut down to the ridge and remove the buccal, labial and palatine portions in sections.

After having added approximately a sufficient amount of wax to both cases, carefully lute the wax ridges to the bite-plates. Then trim the borders of both bite-plates until you think there will be no undue impingement upon the muscles. Place the patient in a dental chair, in order that he or she may be as comfortably seated as possible. Now place the bite-plates in position in the mouth, one at a time, and note carefully that they are trimmed so they do not impinge on any of the muscles, for if there be any undue pressure on one or more muscles it will have a decided tendency to contract them, and will thus prevent a correct occlusion.

In adjusting the bite-plates, there should be sufficient wax to separate the mandible and superior maxilla to such a distance that the lips cannot be closed naturally. Now, by drawing back the angle of the mouth on either side, you will be able to determine where there is need of any increase or decrease of wax. The bite-plates should occlude posteriorly first. This will cause a

displacement of them anteriorly, but this is easier to detect and correct than posterior displacement caused by the occlusion first occurring anteriorly. When the bite-plates are put in place separately and the lips in a natural position show the wax above and below them, respectively, you will understand that the posterior portion of the ridge of wax must be cut down because of the anterior displacement as before mentioned. Care should be exercised to have the occlusal surfaces of both plates as near alike as possible. This is easily accomplished by occasionally placing both on models and approximating the occlusal surfaces.

If you will first employ plaster impressions and the lead plates, as described, and then use the old method of an all-wax bite-plate, you will realize the full value of a basis that is rigidly adapted to all parts included in "bite-taking." My experience with the all-wax bite-plate has convinced me that in many cases the heat of the mouth will, when pressure is produced in occlusion, change the entire plates, and when once changed it is almost impossible to correct the error. In the method just described the base of the bite-plates cannot be changed by the heat of the mouth.

Now that both plates are trimmed so that when in position in the closed mouth a small space is seen between the lips, all is ready for the final occlusion. Before passing to this, however, a final effort should be made to relieve any undue pressure on the muscles or mucous membrane of the ridge. If the patient expresses discomfort when the plates are pressed to place, the cause must be located and removed. After being assured of the proper position of the bite-plates, put the patient in a perfectly erect position in the chair and gently rotate the head backward as far as possible without causing pain and hold it in this position, at the same time holding the bite-plates in place. All folds of mucous membrane

should be drawn from under the plates. Holding the chin between the thumb and first two fingers, press it upward until the occluding surfaces of the bite-plates are almost in contact, then direct the patient to swallow, and as he swallows force the chin upward and backward until the wax surfaces are together. Care should be exercised here not to cause undue pressure on branches of the facial artery, mental vessels and nerves.

Now lean the patient backward until he is at rest against the back of the chair and the head-rest. Through all of this the patient must keep the mouth closed. In this entire operation the least said to the patient gives the best results. After the correct occlusion is thus obtained, "high" and "low" lip lines should be marked on the wax. The low lip line is taken when the lips are in repose, and the high lip line is easily gotten by causing the patient to laugh. The median line should be marked, and a few lines drawn in the regions of the bicuspids and first molars, so the bite-plates can be properly placed on the models. A small elastic is placed around the models and bite to hold them together while being mounted on the articulator. The lip measurements should be marked on models with a pair of callipers before the bite-plates are removed. The casts are now ready for waxing the teeth in place for articulation. Having approximated the facial contour by the above bite-plates, they are removed from models and used only as guides in waxing for final contour. By reference to these and your knowledge of the case, the denture can now be forwarded.

In vulcanizing, put a coil of sheet zinc into the water in the vulcanizer, and it will prevent the formation of much of the black oxide which is found on iron flasks. After the zinc has been used three or four times the flasks will soil the fingers but very little when handled.—*Western Dental Journal*.

GOLD CROWNS VS. FILLINGS.

Dr. C. N. Johnson, of Chicago, in *Dental Review*, among other good things, said: "There is one other place in which I wish to make a plea for operators to avoid devitalization. This was emphasized in my office to-day. A gentleman came to me with a tooth that had been crowned some five or six years ago, an upper molar, and the crown had worn through on the occlusal surface. On removing the crown I found a medium-sized cavity upon the distal surface of the molar, and the rest of the tooth in perfect condition. When a man crowns a tooth like that I hope he will not devitalize the pulp, because the next man into whose hands it falls may want to fill the cavity and make a good tooth of it. I am afraid we see too much of that kind of crowning. I have an engagement with this man to put in a gold filling for him."

This should serve as a text for every honest man to preach a sermon from, and should be more than emphasized by the journals throughout the country!

The suspicion of the public regarding the honesty of the profession is growing to alarming proportions. We are confronted with evidences of it almost daily. One or two conscienceless Shylocks in a community, by reason of their avaricious greed, never hesitate at wholesale mutilation and destruction, if by so doing they can gain a walking advertisement of their infamy and add a few shekels to their ill-gotten gains; and their victims, denied the logic or eloquence of a Portia to plead their cause against extortion and persecution, turn their just and indignant wrath against the entire profession. Once victimized, they look upon all alike, and the result is shown in the constant embarrassment and restricted efforts of those who would discharge an honest service for this class.

It affords us no pleasure to thus openly confess and proclaim to the world that there

are pickpockets among us, and who, by reason of being associated with honorable men in an honorable profession, are protected by the law!

But the evil referred to is on the increase, and the public, as well as the promoters of this evil, should know that we unequivocally, and in terms that cannot be misunderstood, severely condemn this class and their nefarious methods.

We are not so sure but what Dr. Johnson would have done himself and the profession a great service had he called in several reputable gentlemen as witnesses, and in behalf and name of the Chicago Society, prosecuted to the utmost limit of the law the man who placed on this crown.

It would require no little moral courage to pose as prosecutor in a case of this kind, but the aforesaid Shylocks are really in need of an object-lesson in some court of justice, and we pause to see who will prove himself equal to the emergency.

J. A. C.

Application of Clamp.

It is sometimes desirable to use a clamp where it is difficult to keep the dam away from the cavity which is being filled, especially where the cavity is in the buccal surface. And yet the pain caused by the sharp teeth or serrations or edges of the clamp is seriously objectionable, especially if it tips forward, pressing into the anterior of the tooth. If these points or edges are filed away, and a small rubber tube be placed over the clamp, leaving the ends of the tubing a little longer than the clamp, it will prevent it from tipping and be much more comfortable to the patient.—*Dental Brief*.

To clean the marble upon your cabinet or table, take 2 parts common soda, 1 part pumice-stone, 1 part powdered chalk. Mix with water. Rub well over the marble. The stains will be removed, then wash with soap and water.—*Western Dental Journal*.

NOTES FROM THE VERMONT MEETING.

The Vermont Dental Society has just held its twenty-second annual meeting at Rutland.

In return for the invitation given our Society and guests two years ago by the Canadian dentists to celebrate our twentieth anniversary in Montreal, the Canadian dentists were specially invited to meet with us in Rutland. Through some good reason known to themselves, there was not as full a delegation from there as we hoped for. Those who came, chaperoned by the widely known Dr. W. George Beers, of Montreal, seemed to enjoy the whole meeting.

The meeting was called to order by the President, Dr. C. S. Campbell, Wednesday evening, March 16. After the necessary preliminary reports, etc., an address of welcome was given by Mr. Warren, the Mayor of Rutland, in which he referred to dentistry being a branch, and a large one, too, of that most noble of sciences, medicine, claiming that medicine gave more real worth to the human family than all other professions or sciences. He was followed by Dr. Beers, who accepted the welcome extended by the mayor in behalf of the dental profession. The address by the President was full of good counsel and hope for the future.

The paper next called for was by Dr. Pearson, of Boston; subject, the Country Dentist. He spoke of the small fees of the dentist who occupies a small place in the country, relative to the work he is called upon to do; that if the people were as well versed in the subject of the value of their teeth as they were in the usual questions of the day, there were not dentists enough to supply the demand, and that at remunerative prices. The ignorance of the people was something really alarming.

The question of ethics was presented by Dr. McGoven, of Vergennes. The paper

was full of good things and the subject was handled in a masterly manner.

Dr. R. M. Chase, of Bethel, presented a very interesting case for the members of the profession, it being that of a man who was accidentally shot in the face, the ball shattering the jaws and greatly endangering the patient's life. Dr. Chase gave a short report of the treatment the man received in the hospital and the condition of the man when he came under his care, the upper maxillary being badly broken away in front, the lower broken and out of place, and so healed. Dr. C. had repaired the loss so far as he could with an artificial denture. The case merits a much fuller account than I am able to give, and a photo of the models would be very interesting.

Thursday morning a train was chartered and all went to Proctor to view the vast marble quarries and sheds belonging to Senator Proctor, who has been so prominently before the public since his recent trip to Cuba.

In the afternoon Dr. M. L. Rhein, of New York City, described his method of making bridge-work; also read a paper on the preparation of teeth, etc., for bridge-work. The doctor does not believe in extended fixed bridges. He also advocates the destruction and removal of the nerves of all teeth to be crowned for bridge-work, or covered with cap-crown; does not believe in use of arsenic paste or the like for the removal of such, but recommends cataphoresis for this work. Believes the nerves will eventually die under a crown, and, to save after trouble, believes it best to remove the pulps first. His idea could not be grasped by all present, though the doctor is, I believe, a little in advance of his time; yet he acts as though he believes in what he says. Time will tell.

Dr. Young, of Concord, N. H., demonstrated his method of making partial dentures. He makes the models in the usual way, sets up the teeth in rubber instead of wax, using warm instruments.

At a banquet Drs. Beers and Rhein made speeches, which were much enjoyed.

The Society voted to have a bill before the next legislature to oblige graduates to pass the same examination as non-graduates. This is a move in the right direction.

The meeting was worthy of a better notice than I have given.

J. A. ROBINSON.

TREATMENT OF EPULIS.

In the following several methods of treatment of epulis and their respective value, are described by Dr. Edward Foiteau in the *Gazette Medicale*.

Says the French physician: "The name epulis is commonly given to certain tumors of mesodermic origin only, which having their inception on the alveolar edges, later on appear on the gums. These tumors are of the size of a pea to a cherry, round, highly red, of a hard consistency, sometimes flat on the gum, sometimes on a stem. The growth is very unpleasant and painful to the patients.

"There are three different methods of their treatment in use: The oldest is the ligating of the tumor; it is a simple operation causing no hemorrhage or wound. Those practitioners who apply it can claim the ease with which it is done as the only advantage.

"The removal of epulis by the thermocautery is another method. Both tumor and its fleshy base are destroyed; some operators even go down to the alveolar edge.

"The third method is the only reliable one, being executed with the knowledge of the nature and the development of epulis: The oral cavity is to be disinfected thoroughly first, all carious teeth to be filled and the mouth washed with a 10 per cent. solution of carbolic acid. A general anesthetic is unnecessary, while two to three injections of a 10 per cent. solution of

cocain are sufficient to prevent any pain; and teeth which are in the way have to be extracted. This work, though, has been done mostly before the time, the first pain having been attributed to those teeth in the neighborhood of the developing tumor.

"Five minutes after injection the area of the base of the tumor is to be cut with the bistoury. The incision must be deep and should go down to the periosteum. Any hemorrhage can be checked by pressing sterilized cotton on the wound. Should this not prove sufficient the thermocautery will do the work. Now the bony part with the root of the tumor is to be cut with a chisel or with cutting pliers.

"After the operation patient must be advised to keep the mouth in thorough antiseptic condition. In ten or fifteen days a perfect scar will be established.

"The common form of epulis is the sarcoma, which is always constitutional and its slow development should not deceive the operator. Very often epithelial cells are found in the tumor, which have been discovered by Malassez and Abarrau as epithelial particles of tooth germs. Sometimes the tumors are of a fibroid nature; but as it is impossible to have a thorough examination before the operation, it is best to cut away rather more than too little.

"Epulis does not go out from the gum, but from the alveolus; the third method of procedure is therefore always at the place."

F. A. BROSIUS.

Etching on Steel.

To mark steel tools, warm them slightly and rub the steel with wax or hard tallow till a film gathers. Then with a needle scratch your name on the wax, cutting through to the steel. A little nitric acid poured on the marking will quickly eat out the letters. Wipe acid and wax off with a warm, soft rag, and the letters will be clearly etched—*Dental Brief*.

ITEMS FROM SWITZERLAND.

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**Schedule of Prices—Models of
Bridge-work—Root Measure—
Pulp Stones—Copper Amalgam,
Etc.**

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In your No. 23, on page 285, you give "a schedule of prices for dentists in Switzerland." The Canton (or State) of Zurich is, however, the only one in which this schedule is valid. In correcting your article I wish to state that the "minimum charges" are as per §2 of the schedule for the poor or needy, or else if the treasury of a corporation or workmen's association has to defray the dentist's charges. In §4 it says that the "maximum charge given is to be considered a *cheap* equivalent for the services rendered, and that higher prices can be asked according to the financial conditions of the patient, the local (living) expenses, the importance of the operation, the high expense of instruments and the difficulties, exertions, dangers and time employed by the dentist.

Instead of forming my impressions for crown and bridge-work with plaster, I build them up at the edges and flow Wood's metal (formula in *Essig's Metallurgy*) into them after they have dried. This gives a clean cast that can be handled without accidentally breaking off just the part of the tooth or root you need.

A root measure one can easily make in the laboratory. Take an old excavator and file or break off the end. Cut out of a fairly thick plate of brass or German silver a circular piece of about 1-16 inch diameter or smaller. Drill a hole into the center of this to correspond to the size of broken end of excavator and solder the two with silver solder. Next drill two very small holes through the metal disk along the handle. Through these two holes, very thin binding wire is put and the ends twisted around the handle in opposite directions.

The advantage of the long handle is seen after using the instrument.

This is not original, but was shown to me by Dr. F. G. Hudson of Springfield, Mass.

In the treatment of "pulp stones," I have had almost immediate relief from the great pain arising from congested pulps afflicted with them, by applying a paste of formagen, cobalt and cocain crystals, closing the cavity with *thin* cement, and leaving this in the tooth four to five days. At the end of this time, I have been able in most cases, to extirpate the pulp without pain to the patient.

Copper amalgam is still flourishing here, the native dentists using it in incisors as well as molars. The effect is of course not very beautiful, and it would, I believe, cause the staunchest friend of copper amalgam (if he *can* make good gold fillings) to give up its use, if he could for a week see the mouths of the Zurich dentists' average patients.

Most of the better dentists in this country have taken a first-grade course in an American dental college, and instead of making almost exclusively copper amalgam fillings, they employ gold, cement and gold and tin amalgams as a filling material. These dentists (D.D.S.'s) associated last year, and their next meeting will take place in October in the city of Bâle.

ACHARD.

—

Sozodont.

—

The analysis of Sozodont is as follows: Soap, 5 parts; glycerin, 6 parts; spirits, 30 parts; water, 20 parts.—*American Analyst*.

This confirms our opinion that this preparation is about the poorest thing of the kind on the market.—*Western Dental Journal*.

— — — — —

The German war office has determined to furnish artificial teeth gratis to such soldiers as may need them.

An Interesting Case of Sloughing of the Gums.

On August 7th, of last year, one of our local physicians called at my office with one of his patients whom he had been treating for sloughing of the gums until the symptoms had become so alarming that he decided to turn the case over to me.

The patient had his teeth cleaned by another dentist some three weeks previous to his coming to my office. At the time they were cleaned his gums were in a healthy condition, but they rapidly became inflamed after his visit to the other dentist, until when he applied to me for relief the gum septum had sloughed away to the process in the space between every tooth in the mouth, and the festoon of the gum was also involved all the way around, on both the upper and lower jaw. The patient was unable to sleep the night before on account of the copious fetid discharge which dropped back in his mouth and filled his throat. He had also lost several pounds in the previous week and had some fever.

My treatment was to forcibly syringe out each interdental space, using pyrozone in the water syringe. I followed this by thoroughly cauterizing the whole diseased tract with a saturated solution of trichloroacetic acid, carrying it up to the process in the interdental space by means of a few shreds of cotton wound upon a nerve broach. I then directed the patient to rinse his mouth thoroughly every half-hour, using alternately pyrozone and enthyamol and holding it in his mouth for three minutes each time.

When the patient reported on the following day the change for the better was astonishing, as well as gratifying both to his physician and to me. All purulent discharge had ceased, the patient had rested well during the previous night and felt much better. I pursued the same treatment as before, with the exception that I used tincture of

iodine instead of trichloroacetic acid this time. On the two days following this, I used merely the pyrozone, he, in the meantime using the mouth washes regularly. He was then called to another city and I referred him to a dentist there, with directions to have the treatment continued for a few days. He was very busy, however, and as his gums gave him no trouble he neglected to do this.

When he returned a week later his gums had assumed their normal condition and have since given him no trouble. I have no doubt in my mind that the condition was caused by infected scalers, and it should be a lesson to us to always sterilize thoroughly all instruments used in and about the gums.—*Dr. H. B. Hinman, Ohio Dental Journal.*

"Warm Water."

Warm water is pleasant during the removal of decay. When that is completed, one injection of cold water, temperature 65 to 70 degrees F., is necessary to ascertain the nearness or sensitiveness of nerve. If it should be very painful, but instant, having no lingering of pain whatever, then it (the cavity) should be bathed in carbolic acid, pure, for five minutes. If there is the slightest lingering of pain after the injection, then the carbolic acid bath should be followed by varnish and a cement non-conductor.

And that is the reason "why any one should inject cold water into a live tooth while excavating it."

This cold water means of indicating conditions has been of great service to me for twenty-five years or more, and I have never ignored its indications, except to regret it afterwards.

E. L. H.

Sir Henry Bessemer, the inventor of the Bessemer steel-making process, died in London, March 24. He is said to have made \$10,000,000 out of his discovery.

Mixing and Application of Formagen.

Several of the formaldehyd compounds, foremost among which formagen is being praised largely by many of our fellow-practitioners across the ocean. Of course they are advertised extensively; it seems therefore strange that we over here hear very little of the novelties—that is to say, we make very little or no use of them. It may be safely stated that this can be accounted for by the conservatism of the American dental profession at large. While we are having good old stand-bys, we are cautious with all new medicaments and materials, and give them a long year's test before we praise them as infallible.

Dr. Abraham, of Berlin, claims his product, the formagen, an unfailing remedy to cure pulpitis and to preserve the vitality of the exposed pulp. Says he, in the *Zahnärztliche Rundschau*:

"Formagen, made up of a liquid and a powder, is a soft, elastic, and sticky putty. It contains no acids, which would be detrimental to the exposed or inflamed pulp; but the oily, non-irritating and obtunding eugenol contained in it, and the slowly hardening and pliant consistency of formagen, give us the very substance which is capable of preserving the pulp."

Powder and liquid are mixed together by the usual cement-mixing process, and worked well with the spatula or between the dry fingers. After it has become soft again more powder is added. Dry instruments will keep the substance from sticking, or the latter can be rolled in the powder before use. If a special softness is wanted, on account of the condition of the pulp, the mass can be applied under metal caps, asbestos or parchment paper; this again may be covered by cement. It is of course necessary to clean the cavity of all carious matter and dry it out. Only in the most difficult cases softened dentine may be left.

After application of formagen, ten minutes should be given before the filling of the cavity with any desirable material is to be begun.

In root-canals formagen is not to be used; its mild effect is not sufficient to keep the canals in an antiseptic condition for any length of time.

Last, but not least, formagen does not discolor the tooth. Keeping the pulp alive, it preserves its translucent condition.

F. A. B.

Officers of Vermont State Dental Society for 1898-99.

President, Dr. J. A. Robinson, Morrisville; First Vice-President, Dr. K. L. Cleaves, Montpelier; Second Vice-President, Dr. Henry Turrill, Rutland; Recording Secretary, Dr. Thomas Mound, Rutland; Corresponding Secretary, Dr. Grace L. Bosworth, Rutland; Treasurer, Dr. W. H. Munsell, Wells River; State Prosecutor, Dr. G. W. Hoffman, White River Jc.

Executive Committee:—Dr. C. W. Steele, Barre; Dr. J. E. Taggart, Burlington; Dr. J. A. Pearson, Barton.

Next place of meeting, Burlington, the third Wednesday, Thursday and Friday of March, 1899.

Business transacted Friday morning 3-18-'98:

Paper by Dr. W. Geo. Beers, of Montreal; paper by Dr. Palmer, Syracuse, N. Y.; paper by Dr. T. Lenox Curtis, New York City.

To Polish Fissure Fillings.

The following method is good, says the *Indiana Dental Journal*:

"To polish fissure fillings in bicuspid and molars, wrap a polishing strip on a fissure bur. Revolution of the bur in the engine hand-piece will keep the strip in place, and the worn portions may be cut off and thrown away at intervals."

THE
American Dental Weekly
 ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription \$2.00 per year; \$1.00 for six months—Including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, April 7, 1898.

The Value of Association.

You may flatter yourself that you can live without being associated with some dental society, but it is equally true the society can and does live without you. Who is the greater loser? Did it ever occur to you that the most successful men in the profession have been loyal and true to their respective associations? It is possible they would have achieved some distinction as non-society men, but the fact remains, nevertheless, that those who are best known in the field of literature or scientific research, or as artistic operators in dental prosthesis, are strong, participating advocates of dental associations.

Hence it would be the better part of valor, not to say common sense, to lay aside whatever egotism or prejudice you may have, and embrace the first opportunity to affiliate with your nearest home organization.

The young men just entering the profes-

sion could make no better investment than a membership in their State society. Should you imagine that your recent college training had thoroughly equipped you for the serious work before you, then we would insist, with double emphasis, that you are the one above all others who are most in need of the benefits accruing from active participation in a live association.

A gentleman well known and greatly admired throughout the profession, Dr. H. A. Smith, of Cincinnati, in *International Dental Journal*, adds refreshing testimony on this line when he says:

"I have been a society man from the beginning. On the day I received my degree I joined the old Mississippi Valley Association, and was a member till its dissolution. I often said if my relations with dental associations had been cut out of my dental life it would have been comparatively a blank, nothing but drudgery and hard work; but it has been the meeting with my fellows that has stimulated me."

If the roll could be called all would respond with a hearty amen! J. A. C.

The rd Met.

The Board of Dental Examiners of Georgia held a three days session last week and passed upon forty applicants for license. It is said that a license from this board is more appreciated than that of any other State, and more appreciated than a diploma from the ordinary school.

Whether this is true or not, we know that when a license from the Georgia Board is granted, the receiver of the same has passed a satisfactory examination.

The Medical Board was in session at the same time and place. They had before them sixty applicants, and finished work in twenty-four hours. Such work can be but farcical. Nearly eight years' service on the Georgia Board of Dental Examiners has convinced us, year by year, of the im-

portance of such boards, composed as they should be of competent, careful and impartial men. Not a session is held that does not show the benefit of the checkmating power invested in them. And they will be needed just so long as the commercial spirit exists in dental education. And all institutions that strive for the uplifting of the dental profession are in favor of them, and they are here to stay quite awhile yet.

A New Dental School.

It is rumored that there are efforts being made to have another dental college in Georgia. The originator of the scheme, we are informed, is not a dentist, but an attache of a medical school, who sees millions in it. We simply wish to say there is no need for another dental school, not only in Georgia, but in the United States. There are enough now to supply the demand for the next twenty-five years. In fact, it would be more pleasing to hear that some of the large number now existing were "going out of business."

If this new school is started, it cannot be because there is a need or demand for it, but simply because the promoter hopes to make money out of it.

We have also heard that the promoter says he does not care a whit whether the State Board of Dental Examiners sanctions his scheme or not, and does not care a thrip about the College Faculty Association.

Such a care-nothing individual as this can only be at the head of a Cheap John concern, and his efforts should be squelched, if possible.

A Bit of History ?

Speaking of Dr. Thomas Evans, *The Dentist* says:

He was one of the earliest of those shrewd investigators who applied "vulcanized caoutchouc" successfully to dental prosthesis. And although his claim to have

been the first may not be valid, in his pamphlet "On the discovery of vulcanized caoutchouc and the priority of its application to dental purposes" (Paris, 1867), Evans shows conclusively by sworn evidence of the widow Morey, whose husband took out a patent in 1852 for applying rubber to dentures, "that he had often discussed the subject of his application of rubber to dentures with Morey." In this pamphlet there is also a letter from the late Parson Shaw, of Manchester, who states that he wrote to C. Ash & Sons, who say "they understand you (Evans) made a piece of hard rubber as early as 1852." Evans at this period worked most disinterestedly to make rubber free to be used like any other commodity for the good of mankind, and by his strenuous advocacy he rescued it from the hands of a few interested persons, who desired to monopolize an article and its use by pretending patented rights.

The Thermometer.

An item in your issue of January 20, regarding the allowance to be made in computing the temperature of a vulcanizer when some of the mercury happens to get "left up the thermometer" (see page 240), is my excuse for offering you the following incident:

Having a thermometer which had been laid aside as useless because of a break in the column of mercury, due to the jar of a fall, which, while not breaking the glass, left part of the mercury above the 110° mark, the residue failing to rise above 70°, and needing a thermometer for my study, it occurred to me to hold the thermometer near a hot stove until the extreme heat caused the mercury in the lower part of the tube to expand and rise until it made a junction with that in the upper part of the tube. Carrying it outside, in cooling off suddenly the mercury all went down together to 58°. When taken back into the house it rose

gradually until it reached exactly the degree marked by a reliable thermometer—72°, and it has behaved itself properly ever since.

MRS. J. M. WALKER.

Bay St. Louis, Miss.

[It may not be out of place here to state that the column of mercury in our vulcanizer thermometer has often separated, from some cause, which was an annoyance until we found out that by jarring the cap of the vulcanizer containing the thermometer down on a pad placed on a table caused the mercury to reunite.—ED.]

Hints by a Lazy Man.

1. You can cut vulcanite with a file better when both are dry than wet. If you think you need a new file, dip your plate in dry plaster of Paris, rub it off with a wheel-brush, and often you will find that the fault is not in the file.

2. After you have polished your plate, sprinkle a little dry plaster on it, and give it a run over the soft wheel-brush.

3. Tack a square piece of bed-tick or apron cloth under the part of the bench where you work. It will always be there. Pull it over your knees when you sit there to work. Keeps your pantaloons clean, and often keeps you from saying naughty words, as it catches teeth you might drop on the floor.

4. When your rubber overshoes wear out, keep the soles. Very handy if fastened on a block convenient to use. The heels make good bench blocks.

5. Keep your old kid gloves and wear them when sandpapering or polishing artificial sets. Rub vaseline into your fingers, nails and over your fingers before putting on the gloves.

6. When your dental engine kicks or makes a noise at the joints, oil it a little. If that does not stop the row, do not swear at the manufacturer until you have got down on your marrow-bones and tightened

up screws that may be loose. If that succeeds, shake hands with yourself; if it does not, smash something. It will ease your mind.

7. Cover your dental engine with a cover the shape of an old candle extinguisher.—*Dominion Dental Journal*.

The Teeth and Life Insurance Examinations.

Dr. Beadles, in his presidential address at the St. Augustine meeting, referred to the peculiar indifference manifested by physicians in general to the condition of the teeth as a factor in diseases. If statistics could be procured, showing the condition of the teeth of all persons upon whose death any given insurance company made payment during a year, the officers would probably open their eyes in astonishment. An intelligent study of the teeth might reveal facts in regard to longevity that would be surprising. Both the public and the insurance companies would be benefited if the condition of the teeth was made a subject of investigation in the medical examination for life insurance.

In conformity with a recommendation of the committee on the president's address, a resolution was adopted, instructing the corresponding secretary to correspond with prominent life insurance agents in regard to the importance of the examination by oral pathologists of all candidates for life insurance.

We will look forward with interest to the fruits of this correspondence.

Salmagundi a Leroy.

Did you digest that scientific disquisition in the last weekly by Dr. Louis Leroy of New York?

He admits that the dam cannot protect some cavities, and in the next paragraph intimates with what nicety and precision work must be done to attain positive results,

and one would naturally suppose that the doctor thinks he is the man that can do it. I don't doubt at all now that the doctor can so contract himself that he can put on his diving-bell, take his little "tool chest," descend to the apex of any molar root and there smoothly, nicely and positively fill with any noble metal like gold, burnishing same so that no warlike germ will ever dare shoot against his perfect fortification, and what next?

"There is not a known remedy in our armamentarium that is unlimited or eternal in its action, and which is at the same time non-irritating."

If they don't do the work nicely and positively the doctor ought to discard them as pseudoscientific remedies.

Since the doctor has found that "things are what they seem" (to him) and has placed me with the "short cut" brigade I feel honored.

I do not blame him for preferring "she-roots" to "short cuts." In the discussion of a subject we only get information or arrive at a conclusion from a logical form of argument. I expected that if at this day pulp mummification were condemned, some reason would be assigned. If there is no astringent property in dried alum, if thymol is not antiseptic, if glycerol has no affinity for moisture, and if oxide of zinc does not retain color, in sufficient degree for these agents to hermetically seal and preserve a root-canal, then some man give his unsatisfactory experience with explanation of failure? No man is further from abusing his patient by malpractice than I, so far as intention goes. Neither do I say "*Marcus dixit, ita est.*"

W. H. WEAVER.

Eserine as Pulp Devitalizing Agent.

Eserine is the alkaloid of the calabar bean, and has been in use in ophthalmic surgery for its effects in contracting the pupil. Lately

it also has been successfully used in dental surgery by the French scientist, Dr. Dubois.

The following is what Dr. D'Argent says in an article in the *Zahnärztliche Wochenschrift*, headed "The effect of arsenious acid on the pulp of the tooth." Going out from the fact that the arsenious acid, pure or mixed with morphine, creosote, phenol, etc., has never given entire satisfaction as far as the pain caused to the patient is concerned, Dr. Dubois turned to some medicaments which, contracting the blood-vessels, should in connection with the acid, rid patient as well as practitioner, of all unpleasant experiences.

He used atropin with great success, but owing to its poisonous effects, even in the smallest quantities, he had to discard the same and replaced it by the eserine, whose contracting qualities are the same, while it is only one-fifth as poisonous as the atropin. To this he added cocain, which also is a contracting agent and besides a first-class local anesthetic. Dr. Dubois used these substances in the following formula:

Arsenious acid.....	0.5 grammes.
Eserine.....	0.2 "
Cocain	0.2 "
Chloroform q. s. to make a soft paste.	

He claims that this paste is entirely painless, whether the pulp is laid open or not.

F. A. B.

We beg of the editor of the *Dental Cosmos* not to push the editor of the *International Dental Journal* any deeper in the mire, in which he placed himself. He is too good a man to be sent entirely out of sight.

Disinfection by Creolin-Vasogenin Soap.

Professor Bayer, of Brüssel, Belgium, recommends above soap in the *Odontologische Blätter* as excellent means to disinfect hands, as well as instruments, claiming two distinct advantages: its property of penetrating everywhere, and it is absolutely harmless and preserves the skin.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., APRIL 14, 1898.

NO. 31.

SOME USES OF HYDROGEN DIOXIDE.

It is refreshing to read a clinical paper like the following, by Dr. George S. Allan. The extracts are from the *International Dental Journal*:

"The action of hydrogen dioxide is that of a destroying agent. It unites with the organic products of a dead pulp and absolutely destroys them as well as the germs themselves. The dead material is carried away with the gases generated. Hydrogen dioxide is simply oxygenated water. The symbol of water is H_2O . Hydrogen dioxide is H_2O_2 . In other words, there is an extra atom of oxygen united with the two atoms of hydrogen. Pure hydrogen dioxide is a heavy liquid which is a chemical curiosity and most dangerous to handle. We know it only in its solutions,—either the aqueous or the ethereal solution. The two solutions have somewhat different properties, although acting on the same lines. The H_2O_2 , in breaking up, becomes H_2O plus the atom of oxygen liberated, and it is this atom of freshly liberated oxygen that does the work sought for. The ethereal solutions, five and twenty-five per cent., we are acquainted with are fairly permanent ones. The figures are accurate, and really represent the strength of the solutions. They are caustics, but their caustic properties are not injurious, and soon pass off. The treatment of a tooth, containing a dead pulp, with H_2O_2 , is a very simple matter. The object desired is to bring it to an aseptic condition, and it is to

this point more than all others that I wish to draw attention. The virtues of H_2O_2 , as a bleaching agent have been heralded for several years, and in the hands of almost all good practitioners it has become an agent they cannot do without, its action being so quick, so certain, and so satisfactory to both operator and patient. But no attention, so far as I am aware, has been drawn to the fact that these teeth ought to be treated with H_2O_2 , or with some other germicide, not alone to bring about the natural color, but also to restore the teeth to a healthy and so far as possible, aseptic condition. I have been in the habit, since the first preparations were brought to our notice, of treating pulpless teeth, even molars and roots preparatory to capping, where discolorations would not be noticed, with H_2O_2 , for the purpose of bringing them to a healthy condition, and the practice is proving very valuable. The treatment is, of course, the same that one would employ in bleaching; the apices of the roots being closed and the rubber dam applied when possible, the H_2O_2 is freely used.

As to bleaching I would say a word. Many use a twenty-five per cent. ethereal solution and some a five per cent. for this purpose. Others still claim they obtain a more prompt and effective action by means of the electric (cataphoric) current. So far as I can see, there is nothing gained by using the cataphoric current for bleaching purposes. There is no advantage in using the twenty-five per cent. solution of hydrogen dioxide, and I always employ the

five per cent. solution. If a five per cent. solution is used the evaporation soon reduces it to a twenty-five per cent. solution, and by repeatedly swabbing out the cavity the desired change in color can be quickly obtained. I do not know that I have ever failed in my effort to bring a discolored tooth back to its normal color. It is well to be cautious and stop a little short of the full measure of success. Then seal a small quantity of the five per cent. solution in the tooth for a day, and usually no further treatment will be required. Bleaching can be, and often is, overdone. Great care should be exercised in guarding the adjoining teeth, if living, from the action of the agent. Even if the tooth be sound it may be affected, but if there happens to be an open cavity, there will surely be trouble and possibly intense pain, which may last for several days. A gold filling is only a partial preventive at best. To guard against these unpleasant sequences one must either isolate the tooth he is operating upon or else protect the adjoining teeth with a coating of wax or rubber in some way, so that the H_2O_2 will not come in contact with them.

Whenever it becomes necessary to remove the pulp from a tooth, the contents of the tubules also should be removed, for the latter are quite as likely to prove a cause of future trouble as is the pulp itself. In fact, it may safely be asserted that far too little attention has in the past been given to this point. It is only partly true that the dentinal fibers are hermetically sealed in the tubules after the pulp-chamber has been filled. The contents of pulp-chamber and tubules once removed, too great care cannot be taken to prevent the ingress of germs or germ foods in the future. H_2O_2 is, so far as I know, the only agent that will completely make way with everything objectionable.

In the treatment of deciduous teeth, when from the absorption of the roots root-filling is impracticable, an easy and reasonably sure method of practice is, after the

removal of the pulp and contents of tubules, to first sterilize the pulp-chamber and tubules by using the 3 per cent. aqueous solution of hydrogen dioxide. The open ends of the tubules should then be closed with some preparation like cavatine, and the cavity and pulp-chamber only filled with gutta-percha or other soft filling-material. A temporary tooth carefully treated and filled in this manner seldom gives trouble, and the absorption of the roots is not necessarily interfered with.

"The most satisfactory method of obtaining absolute H_2O_2 for dental purposes is by immersing a pledget of absorbent cotton in pyrozone, twenty-five per cent. solution, and allowing the ether to evaporate. To prepare a fifty per cent. solution, it will be found most satisfactory to employ glycerin as the solvent. One tube of pyrozone, twenty-five per cent. solution, should be poured on fifteen minims of glycerin and allowed to stand in an open dish until the ether has evaporated. The glycerin will then contain fifty per cent. of H_2O_2 . The uses of a solution of this strength will readily suggest themselves to the practitioner. Aqueous solutions of twenty-five per cent. strength can be readily prepared by shaking the contents of a tube of twenty-five per cent. solution with half a drachm of distilled water and separating the mixture through a funnel, or better, by means of a pipette drawing off the ether floating on the top. The lower layer will contain the H_2O_2 in aqueous solution. Pyrozone, five-per-cent. solution ethereal, can be prepared by adding the contents of one tube of pyrozone, twenty-five-per-cent. solution ethereal, to half a fluidounce of pure sulphuric ether." It is interesting to note the behavior of the different aqueous solutions towards nitrate of silver. If there should be any hydrochloric acid present, its presence will be indicated by a more or less flaky precipitate. A faint opalescence, however, does not indicate any acid reaction.

The twenty-five-per-cent. ethereal solution comes in small tubes hermetically sealed. They can easily and without any danger whatever be opened. It is wise to cool the tube before making the attempt. Then hold the tube wrapped in a wet towel, and gently cut the end with a file and break it off. Make the cut some distance back from the tip, and point the tube away from the face.

The most convenient vessels that I have found in which to make the aqueous solutions are the one-drachm (120-minim) glasses to be had at all druggists. Those with parallel sides are to be preferred. This aqueous solution, however, is not permanent. It can be kept for perhaps a week, but it gradually deteriorates and becomes cloudy and unfit for use, but as it is quickly prepared, one need not deny himself any advantages it may offer.

The aqueous and glycerin solutions of H_2O_2 do not seem to give the same amount of pain as the ethereal solutions, and this because the ether evaporates much more rapidly than the glycerine, and there would not probably be the same rapid disengagement of gas. I have within the last few days taken the twenty-five-per-cent. aqueous solution and swabbed out cavities with it in living teeth when excavating, without saying anything to the patient, and no notice was taken of it. I make these remarks with some caution, because I do not know what further experiments in this line may lead to, so that I would advise any one who thinks of using them to be cautious, because the pain that this H_2O_2 gives is greater than that caused by any other germicidal solution that we have; if we could get rid of that one objection, I think it would take the place of every other germicide for dental purposes.

Wishing to demonstrate the action of the ethereal solutions of H_2O_2 , whether it would penetrate from the tubules through the cementum and to the outside of the tooth, I took the double root of a molar and coat-

ed the outside with wax, and also the exposed broken end, so that the only entrance for the H_2O_2 would be through the pulp-chamber; I then put it in a twenty-five-per-cent. ethereal solution and left it for an hour. As will be seen, the tooth, which was very much discolored and quite dark, is now restored to its normal color, outside as well as inside, showing that the action of the H_2O_2 has been through the tubules and cementum, and that if the treatment had continued a great length of time there would have been pain in the socket of the tooth from the penetrating property of the gases through the whole thickness of the tooth to the peridentium. In bleaching teeth in the mouth I have many times obtained the same results. I have seen a portion of the roots exposed, stained dark yellow or brown, and restored to their natural color, the exposed portion of the root as well as the crown, and wholly from the action of the H_2O_2 in the pulp-chamber. Enamel is likewise penetrated by it through the dentine, but more slowly."

"BLACK DEVIL."

There are remedies and remedies and remedies, and methods and methods and methods, for the treatment of alveolar abscess. And while we have our private opinion as to the use of *creosote* in dental practice, we are willing to concede to others the right to employ what they please. Hence we give place to what Dr. P. H. Jones, Clear Lake, Iowa, has to say of its use, as taken from *Items of Interest*:

"Creosote and iodine is a remedy old to the profession. It originated with Dr. Atkinson, of New York, and was called by him "Black Devil." It is prepared by dissolving crystals of iodine in creosote until you have a saturated solution. It is of a black color and a syrupy consistence, and is a vesicant. It is an unpleasant remedy to use, having a pungent, penetrating odor, which, were it not for the highly satisfac-

tory results attending its exhibition, would condemn it.

We believe that we can safely say that a large majority of chronic alveolar abscesses may be cured with one treatment, and the entire operation of filling be completed at one sitting without any fear of unpleasant after-effects, if the abscess is so located that it can be completely flushed with the remedy. Of course, cases where there is a fistulous opening, or an artificial opening can be made into the abscess, are the ones most favorable to this treatment.

In using the remedy, protect the adjacent tissues well with absorbent cotton or napkins. After an opening through the apical foramen and through the sinus has been effected, wash out with H_2O_2 , or three per cent. solution of pyrozone. Wipe out canals and with a few shreds of cotton wound loosely on a broach, carry the remedy as far up into the canal as possible. Place unvulcanized rubber in the canal, and with a wooden piston force the remedy out through the sinus, placing napkin over the opening. If preferred, a hypodermic syringe may be used, being careful to have such a packing about the needle as to prevent regurgitation of the medicament into the mouth. As soon as the remedy appears at the opening, fill the roots, forcing the *chloro percha* through sinus and out at opening, which will insure perfect root-filling. The rest of the operation can then be completed in the usual manner.

Never use creosote and iodine where tannin has been used, or tannin where creosote and iodine have been used, as an ink black color is produced which cannot be removed. One practitioner says that this solution may be injected into any tooth and all traces of the color be removed by ammonia. While we have injected it into superior central incisors of a dark color, and by means of ammonia left the tooth as good color as before the operation, we must confess that we should hesitate about injecting it into the lighter and more delicately shaded teeth."

DENTAL HYGIENE.

Dr. J. W. David, Mexia, Tex., contributed an able paper on this subject at the St. Augustine meeting. He renewed briefly the work of Dr. Miller proving tooth decay to be due to micro-organisms acting in favorable local media through the action of the acids of fermentation upon the inorganic constituents of tooth-structure.

With proper attention to oral hygiene, the microbes are dislodged and washed away—no particles of food are allowed to ferment, calculus is not allowed to accumulate and irritate the gums.

By maintaining a clean, healthy condition of the mouth and teeth, the dentist becomes a co-laborer with the physician in preventing diseases of the alimentary canal. Systemic infection may result from neglected teeth which are "so many little test-tubes of microbe culture, ready to inoculate the human body whenever and wherever its natural resistance is lowered." Open wounds produced by lancing gums or extracting teeth or accidental wounds are open to infection in an unhygienic mouth. A hygienic condition of the mouth should be established, and an aseptic condition obtained before work upon decayed teeth is begun, just as the field for any surgical procedure should be rendered aseptic.

Dr. S. W. Foster, of Atlanta, read a paper on the same subject, following a similar line of thought. Hygiene, in its broadest sense, includes the study of all conditions relative to the development, growth and preservation of the individual, and presents itself in a twofold aspect—the prevention of disease and the removal of the cause.

Preventive hygiene of the oral cavity begins with embryonic development. The teeth which decay the first are those that are imperfectly developed, hence the nutritive supply becomes an important consideration, especially as the teeth, when once

formed, have no power of repair. In connection with proper nutritive supplies there must be exercise and sleep to secure assimilation. With the teeth in place, the next important preventive feature is cleanliness—asepticism.

Tooth decay is a chemico-parasitical process, the acids which decalcify the teeth being germated by the fermentation of food substances lodged around and about the teeth. Hence the importance of mechanical cleansing as an element of oral hygiene. There is nothing that will destroy mouth bacterie spores which will not also destroy the mucous membrane. Diluted as antiseptics must be for use in the oral cavity, they only serve to dislodge and wash away the accumulations, requiring the assistance of tooth-brush and dentifrice, and above all the dental floss passed between the teeth.

Things Practical.

Dr. E. B. Edgars, of Waterloo, Iowa, in *Items of Interest*, says:

"It is very annoying to vulcanize a thick plate, and have it come out porous. This may be avoided by packing pink rubber in the center of the thickest places. The plate will be as tough and strong as though all of red or black rubber, and will have no holes in it. Care should be observed to cover the pink rubber so that it will not reach the surface when the plate is polished. Second. Formalin, full strength, applied on a pellet of cotton to an exposed pulp will stop toothache when all else fails. Third. To mend broken models or impressions use oxy-phosphate cement mixed to the consistency of cream and apply to the broken parts. In uniting the pieces be sure to squeeze out all excess. Let it harden thoroughly and one would never know that the piece had ever been broken."

The editor adds:

"This method of preparing broken plaster is not as good as the following: Drop half a teaspoonful of fine plaster on the rim

of a plate, and flow a little water into the plate so that the plaster is soaked. Take a fine camel's hair pencil and dip up the wet plaster almost as thin as the water itself, and smear this over the crack when the broken parts are placed together. The water soaks into the model and the moist plaster enters the crack, firmly reuniting the parts when thoroughly hardened. It is best to chip out tiny fragments along the edges of the broken pieces so as to afford a little space in which the new plaster may find lodgment. Not only may repairs be effected in this manner, but even lost parts of teeth may be restored, with a little deftness and a knowledge of tooth shapes. Suppose that a corner of a tooth should be broken from a record model of a regulating case. With plaster added with the camel's hair brush bit by bit the shape of the tooth may be contoured and fully restored. This method was given to the profession many years ago by Dr. Norman W. Kingsley, yet curiously enough dentists are still repairing models with shellac, hard wax, oxy-phosphate, etc., which seems ludicrous to one who has followed his advice."

Meat and Fruit.

The majority of people eat more meat than they require. Meat eaten once a day is sufficient for a person not engaged in manual labor or who does not take much strong outdoor exercise. A large number of complaints contracted owe their origin to the consumption of food which entails a greater drain on the gastric juices than the system is able to withstand. The cures attributed to the grape occur for the most part with those who are accustomed to high living, and are really owing to the fact that the organs of digestion are given a much-needed rest. Semi-starvation would answer the purpose almost as well. For the person whose work lies chiefly indoors a mixed and varied diet is most conducive to good health.—*Medical Record*.

Cavity Lining for Zinc Phosphate Fillings.

Dr. Edwin Day Downs, in *Dental Cosmos*, describes his method thus:

"Clinical experience, and conversations with other dentists, have convinced me that oxyphosphate of zinc fillings frequently cause irritation of the pulp, and available varnishes are not effective in preventing this action. A few experiments performed in the laboratory have seemed to confirm this impression. Of late I have adopted a practice that is seemingly effective. After the cavity is prepared, dried, and ready for filling, preferably, of course, with the rubber-dam on, I varnish it with hardened fir balsam dissolved in chloroform. Then I take a piece of No. 4 gold-foil of proper size, which I have ready, carry into cavity, and carefully pat to place with pieces of cotton or kid, covering all the walls. I examine with magnifying glass and see that there are no uncovered places. If I find any I cover them with the foil. Into this gold-lined cavity or pocket of gold I place the cement. Of course it is not always easy to line these cavities,—the gold punctures or rolls up easily,—but if care is used, and the cotton, or kid, and pliers kept free from varnish, it is far from difficult. In calling the attention of one gentleman to this method he suggested the use of tin instead of gold-foil, but the gold gives such a desirable color, and so little is needed, that I have given the tin no trial. If clinical observation on my part is reliable, this now seems an effective and desirable lining for the purpose suggested."

The writer has employed tin-foil with pleasing results and believes it is equal to gold-foil.

The *Medical and Surgical Reporter* of Philadelphia, now in its fiftieth year, has made a decided change. It is enlarged and improved generally.

True Perception of the Profession.

About fifteen years ago a dentist in St. Louis filled some teeth for a young man and when he presented the account, for the services rendered, to the father of the young man, he refused to pay it on the ground that one of the fillings had come out. The dentist placed the account in the hands of his attorney, who brought suit for the amount at once. On the trial of the case the young man was put on the stand and testified under oath that one of the fillings came out while eating his dinner. When asked what it looked like he said it looked like a piece of lead, and that he was eating tomatoes at the time. The prosecuting attorney suggested that it was a piece of solder that got into the tomatoes while the can was being soldered to close it. The young man swore they were not canned, but fresh tomatoes. It being in midwinter the attorney asked where he got fresh tomatoes at that season, but he could not give a satisfactory explanation on this point.

The dentist was then put on the stand and many questions asked him as to prices, character of the operations performed and finally how much gold it took to fill a cavity? The dentist drew himself up and astonished the whole court by this answer: "He could no more tell how much it took to fill one of those cavities than Van Dyck could tell how much paint he used in painting a portrait, for which he charged \$5,000."

He won his suit, as he deserved to, for this dentist had true perceptions as to his profession.

J. H. COYLE.

Bichloride of Mercury a Caution.

Dr. Rutherford, in the *Atlantic Medical Weekly*, in reporting a case of the removal of a spina bifida on a child, says that to close a small part of the wound which persisted in leaking, he used a divided bichloride tablet, pointed one-half of it and used it as a cautery. The opening immediately closed.

A Compliment.

That a *Weekly* dental journal was a necessity, and would be welcomed by the profession, has been proven to our entire satisfaction. The editor of *Items of Interest* endorses our position, and as a journalist, his opinion is appreciated. He says:

"Within the last few months a new dental journal was added to the growing list of periodicals devoted to our specialty. The AMERICAN DENTAL WEEKLY is published in Atlanta, Ga., and is edited by Dr. Catching, widely known in connection with his popular 'Compendium.' Dr. Catching has a corps of brother editors, all of whom together make the most imposing editorial staff connected with dental literature. It is worthy of note, however, that these gentlemen are not 'imposing editorial stuff' upon their rapidly growing list of readers, but on the contrary are filling their pages with many practical bits of good advice and good practice culled from their personal experiences.

"There is no good reason why dentistry should not, like medicine, have weekly periodicals, and we sincerely wish these gentlemen success as pioneers in the field."

J. A. C.

Cement for Rubber on Metal or Wood.

The following, from a German paper, is said to make an excellent cement for bicycle tires, and as many dentists are wheelmen, it may prove useful:

Put 1 part of shellac, broken into small pieces, into 10 parts of strongest ammonia water, and set it aside for three or four weeks, or until the mass becomes entirely fluid. In use the liquid is applied to the india rubber surface and the latter applied to the metal or wood and firmly wired or corded thereto. When the ammonia has evaporated, a complete joint is formed between the two surfaces.

National Dental Association.

DIVISION OF THE EAST.

At the request of William Jarvie, V. H. Jackson, W. W. Walker, of New York; S. G. Watkins, B. F. Luckey, of New Jersey; E. T. Darby, D. N. MacQuillan, of Pennsylvania; L. D. Shepard, of Massachusetts; H. A. Smith, of Ohio, and G. E. Hunt, of Indiana, a meeting of the members of the National Dental Association residing in the East is called at Odd Fellows' Temple, Albany, New York, on Thursday, the 12th day of May, 1898, at 2 o'clock, to organize a Branch of the National Dental Association, and to transact any other business which may properly come before them.

As this meeting is coincident with that of the New York State Dental Society, any member obtaining a certificate when he purchases his railroad ticket will be entitled to reduced return fare.

Reduced rates at Kenmore Hotel.

THOMAS FULLEBROWN,
President National Dental Association.

JAMES MACMANUS,
Vice-President N. D. A. for the East.

Abscess in the Brain.

A case of dental origin, which ended fatally, is related by Dr. Silax before a meeting of the Medical Society of Berlin. The patient, a boy of twelve years, complained of excruciating pains, with an exophthalmia of one eye. An opening was made in the frontal sinus, but without any result. An infectious meningitis appeared after nine days. The autopsy showed that the superior part of the brain was coated heavily with pus; the base of the brain was free from pus. This abscess had worked its way for some time, but had not caused much trouble; nevertheless it had brought about the inflammation of the antrum, caused by a decayed molar.—*Zahntechnische Reform, Odontologie.*

Pulp Stones.

Dr. Burchard regarding such pathological conditions of the pulp as of "deeper degenerations" says in *International Dental Journal*:

"In regard to the types of these degenerations, we must differentiate between them. The first stage is where there is an exaltation of the formative function of the odontoblasts, resulting in the formation of secondary dentine. In such cases there is no painful reaction, reflex neuralgias do not occur, and no abnormal response. Under the head of secondary dentine, pulp nodules are not to be placed, because it is very rarely that these structures represent the typical dental structures. They are formed in the substance of the pulp, and indicate degenerations. It is in these deep degenerations that wide reflex neuralgias are marked.

Hyperemia of all the pulps of the teeth is very common in conditions of gout, and so is general hyperemia of the pericementum.

A pulp stone growing in an abraded tooth may be the cause of vicious neuralgia. If another tooth in another portion of the mouth be extracted, there may be no evidence of caries or abrasion; but on breaking up the tooth, pulp nodules may be found in greater number than in the primarily affected tooth. There seems to be a dyscrasia in that condition."

Legal Notice.

The Dental Commissioners of Connecticut will meet in the Supreme Court rooms at the Capitol in Hartford, Monday, May 16th, 1898, at 10 o'clock, to examine candidates for license and attend to all matters proper to come before them. Persons desiring to practice in this State must apply to the Recorder for proper blanks, which they will fill out and return to him before the day of examination.

GEORGE L. PARMELE,

Dental Commissioner and Recorder.

Repairing Richmond Crowns.

Dr. T. Ledyard Smith, in *Items of Interest*, offers a unique method of repairing these annoying accidents:

"To repair one of the four superior incisors that has a Richmond crown from which the porcelain has been scaled or broken, perhaps by too prominent occlusion with an inferior tooth, the following method is suggested to save removing the gold fixture and pin, which may be difficult if the pin be close fitting and of platinum:

Cut a longitudinal slot in the remaining backing, cutting with a file so that the under side will be wider than the top, of the dovetail order. Select a tooth that will be as thin as the one broken, and with longitudinal pins, to which solder a little platinum trough or box the shape of the dovetail slot in the backing. A long, narrow piece of platinum should be fitted over the pins and the pins spread slightly to hold it; paint this with borax cream, also the inside of the little platinum box, which will be wide across the top and pressed in close to the pins at the plate. Solder, and finish with file to conform to the slot. Set it with cement.

If done accurately, it will be neat, strong and serviceable, and the neck will fit under the band as before."

A Right Move.

The move to form an Eastern branch of the National Dental Association is a right one. That is the way to make the National Association what it really should be—a rallying time and place for general work. When the National meets in the territory of one of the branches, that branch should merge its meeting into the National, save the executive part of it.

The Southern branch has demonstrated the wisdom of this move. The West should do as the South has done and as the East is proposing to do.

THE
American Dental Weekly
 ISSUED EVERY THURSDAY.

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34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription \$2.00 per year; \$1.00 for six months—Including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, April 14, 1898.

Gold Crowns vs. Fillings.

In pursuing this subject which was ably commented on by Dr. C. N. Johnson in the last issue of THE WEEKLY, we wish to add further testimony, showing the great extent to which the evil he alluded to, is really progressing. As he says, there is no doubt but what the suspicions of the public regarding the honesty of the profession is growing to alarming proportions, and the lamentable part of it is that there are grounds for such suspicions. By this broad assertion we do not mean that the grounds for suspicion regarding honesty exists in every dental office, but we do say there are some offices and "parlors" galore where trickery and dishonesty is placed at a premium far above skill and ability.

The modern gold crown in honest hands has been a blessing to mankind, in that it has enabled the skilled dentist to save many teeth for years of usefulness which other-

wise must have been doomed to the forceps; but in dishonest hands it has been a curse to the profession and to mankind in that it has been a stepping-stone for charlatanry, which could not have existed except by this deceptive glittering display of gold. I venture the assertion that the gold crown as abused in this day is destroying three teeth where it is saving one. If this statement be true, it is appalling, and yet the facts which present themselves to us day by day justify such assertion. Teeth are now being ground out of shape and gold crowns shoved on and cemented where the circumstances of the case do not justify it at all.

In most of these cases no attention is paid to fit. The edges of the crown being driven into the gum, the defects are hidden at least for a time, and some brand of sticky cement will hold it in place until the tooth becomes loosened, which generally is not very long. There is no class of work in dentistry that will so effectually conceal the hotchiness of its construction from the deluded patient as modern crown and bridge-work. This fact has been observed by the Shylocks in the profession, and the abuse to which it has been subjected is something terrible to behold.

A few cases cited may strengthen the assertions herein made.

A patient presented with a cavity in superior bicuspid, which should have been filled. Some argument ensued in regard to price. She claimed she could get the entire tooth covered with gold for the amount asked for filling the cavity. She did get the work done at a "parlor."

In twelve months she came back to see what kind of an appliance could be made to take the place of the tooth, which she removed with her fingers, crown and all. The band hung off on the palatal side at least an eighth of an inch from the neck of the tooth. A ball of cement had been forced up under the gum as large as a small buck-shot.

Case two was a man of mature age, who had about ten teeth in each jaw. It was suggested that two short bridges be made to fill spaces in his teeth, and four or five fillings be inserted. Being dissatisfied with the price, although well able to pay, he went to the "parlor" man. In four or five hours' time this individual had succeeded in crowning every tooth he had, twenty in all, for which he paid eighty dollars in cash.

I have not seen the man's mouth since the work of mutilation took place, but any intelligent practitioner can draw a picture in his own mind.

These two cases are not mentioned because they are at all rare, but because they represent occurrences of a similar nature, which are occurring every day in the vicinity of dental business institutions of the "parlor" type. Can any one wonder at the skepticism which is beginning to be noticed in the minds of the people regarding the profession when such nefarious methods of deception are daily being practiced on them.

H. H. JOHNSON.

A Case of Replanting.

A girl about thirteen years of age, while walking in her sleep, fell upon a chair, which knocked out the left superior lateral incisor and cuspid. Four days afterwards she presented herself with the teeth in a bottle. The canal contents were removed, canals filled with gutta-percha, the ends of the roots were removed, the teeth were placed in warm carbolyzed water and then into formalin, the alveoli were cleansed and the teeth replaced. Operation a success.

To Soften Hard Plaster.

It is said that vinegar will soften plaster. It is used in removing plaster bandages. Bichloride of mercury solution is also said to be good for the same purpose.

What Does It Mean?

Dr. St. Geo. Elliott asked Dr. Halstead, of Johns Hopkins Hospital, "What was the present status of antiseptics in surgery?" He replied: "They are a good thing, but they are by no means a necessity; for two years we have run this hospital without the use of any antiseptic whatever, and with perfect success, but it is a great deal easier to use antiseptics than to take the extra precautions of great cleanliness which is otherwise necessary."

Does this not mean that asepsis is thorough cleanliness, and that thorough cleanliness is asepsis. Are we not trusting more to antiseptics than to cleanliness? Are we not often satisfied to use an antiseptic and to leave undone that which is of more importance—cleanliness?

It is about time that the average practitioner should stop and think a little on this line. We cannot afford to hide uncleanness with antiseptics. Dr. Halstead says it is easier to use the antiseptics than it is to have great cleanliness. And he says wisely. That an institution like the Johns Hopkins Hospital, and it is the very best, can run without the use of antiseptics is saying much, very much, for cleanliness and little for antiseptics.

A Cause of Deaf-Mutism.

In an article in a medical journal (the name of the writer and the journal we can't recall) it was said that a common cause of deaf-mutism is from accretions in the ears of infants, which is first manifested by earache and which is treated for such, but the cause is left till deafness is permanent.

What about that practical item you are now making use of in your laboratory or at your chair? Send it to THE WEEKLY and it will soon return to you in print, and go forth to do others good.

The Left Side of the Jaw.

Dr. Atkinson, in replying to my query as to the cause of the peculiarities of the left side of the jaw, gives me no new light upon the subject. For many years I have given through the dental journals, and otherwise, the same solution of the problem for want of some better, and yet have not been fully satisfied, and so recently have set the ball in motion again.

Dr. Talbot in investigations as to the causes of irregularities of the teeth, after a careful examination of my models, of which I have several hundred, called attention to the subject as "Haskell's Deformity," and evoked this theory, viz.: "That as the lower jaw in mastication always moves from right to left, a fact I believe no one ever before called attention to, and said that as a result the upper teeth and alveolar process were moved gradually to the left, leaving a depression over the left cuspid tooth. Is he correct?"

There is one other peculiarity of the left side of the mouth—the lip rises higher in talking than on the right side.

L. P. HASSELL.

Some one has recently written an article on "Think for Yourself." There is a great necessity for this faculty of the human mind, but very few, comparatively, exercise it. In fact, a few in every line do the thinking for the masses. Only a very few men are doing the thinking for the dental profession.

The venerable Dr. B. H. Teague, of Aiken, S. C., made this office a delightful call. He was in the city on business connected with the Battle Abbey. It is worth a trip to Aiken to know friend Teague. But he will tell you about his disks, arm-rest, etc.

Lycetol is said to eliminate uric acid from the system much more rapidly than other drugs.

Fastidious Operating.

The venerable editor of *Practitioner*, as a diversion from recent laborious efforts on the editorial page, pauses to say a good thing which it would be well for many of us to heed. He says:

"If there be any one thing which a dentist should cultivate, it is a delicacy and lightness of touch. Some dentists, whom we have known, go at their work like a miner with a pick-ax. They are rough, harsh, and their hand, whether with the excavator, the plugger, or engaged in adjusting the various appliances of our art, is very heavy. Their arms always rest burthensomely upon the patient's head. Their finger-nails are continuously digging into tender tissues, and there is a coarseness and clumsiness about their operations that marks an unpardonable heedlessness of the comfort of the patient. There are few things which so forcibly commend an operator to those under his care as tenderness and even daintiness in regard to their sensibilities. The engine bur should be directed as if it were a sentient thing, and napkins should be used as if they were spontaneous production."

To Cast Cusps for Crowns.

The following method, taken from our esteemed contemporary, the *Indiana Dental Journal*, may help some one:

"Cuttle-fish bone makes an excellent mold in which to cast solid cusps or crowns. Select a suitable die from either a Lowry, Hollingsworth or other set and press it into a surface of the bone made flat by a file or by a saw. Cut a gate from the mold thus made to the edge of the bone. Bind or clamp on another piece of bone to the original with the flat surfaces approximating, and into the completed mold thus made pour molten gold plate. Cuttle-fish bone is susceptible of other uses which will readily suggest themselves to the practitioner."

Syphilis.

In an elaborate discussion of the infectious nature of this disease, among other things, Dr. J. F. Schomberg, in the *International Dental Journal*, says:

"Syphilis is an extremely important disease, and I should like to correct any impression that may exist as to its infrequency. It is a very frequent disease, and it may be stated advisedly, that it is just as frequent in high social stations as it is in low, not only abroad, but in this country, and almost every day dentists are bound to have patients come into their offices who have or have had syphilis."

Dr. Fox, the distinguished dermatologist of New York, favored the Atlanta Medical Society last week with a stereopticon lecture on syphilis as manifested on the skin, and speaking of the prevalence of this loathsome malady, corroborated what Dr. Schomberg says of it.

This emphasizes the importance of thorough sterilization of all instruments used in such mouths, and to guard against infection through any abrasion about the hands, or accidental cutting of one's self.

This advice has been repeatedly given heretofore, but the serious consequences which an infection might entail upon the patient and the thoughtless is our only excuse for alluding to it again. J. A. C.

Varnish as a Starter for Fillings.

When using any of the crystal golds, in starting a large filling, if a small quantity of sandarac varnish is placed on the floor of the cavity, and the first pieces of gold placed on it, with gentle pressure, it will facilitate the starting of the filling. The gold can be built across a considerable space from one retainer to another with as much ease as if a plastic were being used. Aside from this value of the varnish it acts as a protection to the dentine.

Artistic Dentistry.

Under this head many dental operations might be grouped, but there is one we desire to mention, which is more esthetical than useful, but which is appreciated by patients.

It is the shortening of elongated front teeth by grinding them to conform to a more natural expression. The points of cuspids frequently present the appearance of tusks, because of their length. The removal of the points with a stone adds much to the appearance of the mouth.

Frequently a central or a lateral incisor, from some cause, will elongate and mar the symmetry of a dental arch. A little grinding will add much to looks. In some cases the point of the outer cusp of a bicuspid can be removed with good effect.

To Make Gutta-Percha Points.

Every one would like to know how to make these points. Here is the way the editor of the *Indiana Dental Journal* says to do it:

"With a knife cut a strip from a sheet of base plate gutta-percha as wide as the sheet is thick and as long as you please. Slightly soften with heat and roll between the thumb and fingers until the angles are obliterated and the strip approximates a circular contour. Cut into quarter-inch lengths. Warm a root-canal plugger and press it into the end of one of these short strips just far enough to keep the strip on the plugger. Warm the strip and roll into conical-shaped points with the penknife blade. This may be done on the wooden edge of a partially opened drawer, or, better still, on a warm glass or porcelain slab."

Will not the liquefaction of air determine some radical changes in physical science?

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., APRIL 21, 1898.

NO. 32.

THE COAGULATION THEORY.

It is refreshing to read a paper occasionally in which the writer demonstrates that he has taken the pains to study closely the works of investigators and makes practical observations on what he finds. Such a paper is found in the *Ohio Dental Journal*, and is written by Dr. H. T. Smith, of Cincinnati. He quotes from the investigations of Dr. Harlan and of Dr. York, on the coagulation and diffusion of medicaments in the dentinal tubuli, and gives his observations, which it is our pleasure to reproduce for the WEEKLY readers. He says:

The question originally at issue in the coagulation theory was whether or not a medicament which has coagulating properties, as used in the treatment of root-canals, so seals the mouths of the dentinal tubes as to prevent the further ingress of itself or of another medicament, afterward used for antiseptic treatment. In other words, are carbolic acid and zinc chlorid self-limiting in their action, and if so, are they contraindicated in the treatment of root-canals? It involves also this question, which is quite as important: Is the product matter from a putrefactive pulp capable of entering the body of the dentine, and if so, is it also capable of infecting pericemental tissues, causing what we recognize as lame teeth?

Looking into the first question, the diffusibility of coagulants, Dr. Harlan's experiments were probably the first made, and were about as follows: The pulps of freshly extracted teeth were removed, the

ends of the roots sealed, and the teeth planted in plaster of Paris. Cotton moistened with carbolic acid in the one case, and with wood creosote and zinc chlorid in the others, was carefully packed in the root-canals. At the end of forty days tests were made in the plaster of Paris for the presence of the coagulant, and none was found. When the essential oils, cloves, cassia, and eucalyptus, were used, it was found after four hours that the oils had plainly penetrated the dentine. By adding carmin to the oils the degree of penetration was distinctly followed. When solutions of silver nitrate were used it was found not to penetrate the tubules to any extent, and it was classed as self-limiting with the other coagulants. The silver nitrate furnishes its own stain, and the degree of penetration was easily defined in sections of the roots. In another set of experiments Dr. Harlan immersed the teeth in starch solution up to their anatomical necks, after treating the canals with coagulating disinfectants and iodine. The characteristic blue color did not appear in the starch solution, hence he concluded that the coagulants were a bar to their own diffusibility. We cannot but believe that these experiments were carefully made and the results accurately reported.

The other side of the question is best represented by the recent experiments of Dr. E. L. York upon the diffusibility of coagulants in dentin, to which the editorial quoted refers as those that settle the question.

Using a number of teeth with both normal and putrescent pulps, Dr. York pre-

pared them about as Dr. Harland did. He injected into the canal of one a ninety-five per cent. carbolic acid, which had previously been colored with a small quantity of fuchsin. The tooth was sealed and wrapped in moist gauze, and was kept at a temperature of 98° F. to simulate the conditions in the mouth. In about eighteen hours the carbolic acid had passed through the dentin, as shown in sections of the root. This experiment was repeated a number of times, so that no doubt as to the result was left in the experimenter's mind. In other experiments the teeth were suspended in water and the test for carbolic acid made with bromin water, when it was found that the carbolic acid had penetrated the roots in about eighteen hours. Next, in order to demonstrate that carbolic acid does not form an impenetrable coagulum at the orificial end of the dentinal tubuli with their albuminous contents, one of the teeth that had contained carbolic acid in its root-canal for seventy hours, was used. The canal was dried and the saturated solution of sodium chlorid was sealed in it. The tooth was suspended in water, and after three hours the water was tested for the presence of the sodium chlorid, using a drop of silver nitrate. The result showed a quantity of silver chlorid thrown down, proving that the coagulum formed was not a barrier to the passage through the dentin of other medicaments used in root-canal treatment. He found also that carbolic acid placed on the white of a boiled egg shows marked diffusibility, from which he infers that carbolic acid is not self-limiting in its action, but penetrates its own coagulum.

Now, here are two sets of similar experiments with exactly opposite results. Which are we to believe? Some one says that it is a question of veracity, but it seems to me that the always possible differences in the dryness and age of the teeth used, and the variations in the quantities and percentages of the solutions used, should be given full

consideration in the results. Dr. Truman says the question is settled in favor of the diffusibility of coagulants. Hence it is still good practice to use carbolic acid in root-canals. There is, however, one point that the experiments do clearly show, and in this they have perhaps chief value. It is said that the essential oils are very much more diffusible than the coagulants, and for this reason they have a distinct advantage of the latter in certain instances of root-canal treatment; and perhaps the mistake is made when the question is not allowed to rest with this comparison, but is pushed to the ostracism of one or the other class of medicaments.

A few observations I have put down as they occurred in looking up this question. The first is the statement of Dr. Bethel about the use of silver nitrate. If applied without the use of cataphoresis it is practically self-limiting, and even with the aid of cataphoresis there is little or no danger of forcing the silver nitrate through the whole extent of the dentinal tubules and causing injury to the peridental membrane.

Another observation is the statement that capillary attraction does not come to our aid, as had been supposed, in the rather difficult operation of forcing chloro-percha and medicaments into closed tubes such as are most root-canals. Experiments show that capillary attraction only takes place in minute tubes that are open at both ends; therefore, the solubility of chloro-percha in oil of cassia and other of the essential oils is certainly to be taken advantage of by treating the canal, just previous to filling, with one of these oils.

Another observation is the radical statement I found, that the successful treatment of pulpless teeth depends first upon the exclusive use of diffusible disinfectants, and secondly upon the repeated and continued application of the disinfectant dressing for a considerable length of time. This statement excludes the use of carbolic acid.

mercuric chlorid and other antiseptics, and opposes the accepted custom of immediate root-filling, which is certainly good practice in many cases. And, finally, in regard to the future of root-canal treatment, I have only to say that whether or not the advances will be in line of mummifying pastes or chemico-metallic methods, or will remain a process improved along the present lines of practice—that of dragging out each particle of nerve-tissue to the end of the root and the end of the hour—it is difficult to say, but it is sincerely to be hoped that the improvements will be effected in the methods as well as in the medicaments.

For Aphthous Stomatitis.

The *New York Medical Journal* gives the following formulæ:

	R	Borax.....	4 parts
		Tincture of myrrh.....	8 "
		Syrup of mulberries.....	60 "
M.			
	R	Borax.....	4 parts
		Tincture of benzoin.....	2 "
		Distilled water.....	10 "
		Syrup.....	20 "
M.			
	R	Sodium phosphate.....	10 parts
		Orange-flower water.....	25 "
		Honey of roses.....	50 "
M.			
	R	Salicylic acid.....	2 parts
		Alcohol.....	10 "
		Glycerin.....	20 "
M.			

Any one of these collutories may be applied five or six times a day. In grave cases the following may be employed internally:

	R	Potassium chlorate.....	1 part
		Distilled water.....	90 parts
		Raspberry syrup.....	10 "
M.			

A teaspoonful every two hours.

To Deodorize Iodoform.

We know a Georgia dentist who, while riding a bicycle, ran over a skunk (polecat). His patients never afterwards complained of the odor of iodoform.

A.

A DENTIST'S PERSONAL EXPERIENCE WITH DIFFERENT MATERIALS FOR DENTAL PLATES.

The following interesting personal experience with the different materials for dental plates, by Dr. S. B. Palmer, we take from the *Dominion Dental Journal*:

During fifty years a number of plates of various materials have been worn, each giving experience that could not have been gained by any other means. This information is of no account except as it may benefit some young practitioner by knowing points regarding metals worn in the mouth which are not recorded. I will briefly mention the peculiarities of each in turn. In early times silver was used for temporary work, also when gold could not be afforded.

Silver in the mouth is a positive element, corresponding to the zinc element in a galvanic cell, consequently any food containing carbon, as toast, broiled meats, roasted peanuts, coffee, etc., produced an unpleasant metallic taste; sulphur in eggs, breathing smoke from gunpowder, or even passing a sulphur spring, in breathing through the mouth the taste would detect sulphur. Still another feature, gold clasps were often used on silver plates, destruction of the teeth soon followed. The clasps, being negative, became the positive plate from which the current went out to decompose the impacted food, and thus furnish acid to dissolve the enamel. A gold plate, with an alleged silver clasp, would be an improvement, or a silver plate with an alloy of silver and copper clasps would have been a great improvement. The silver plate was discarded for gold, which was a relief from the taste of a metal. With gold the current was reversed, the plate was negative, and not acted upon by food like carbon, sulphur, etc.

It was a galvanometer, however, to detect base metals or metallic compounds. Silver, iron, tin, lead, or liquids, such as we often use in canned fruits, made it known. Thus

the study became exceedingly interesting. Rubber came and was put to the test, and the result may surprise those who have not made the change. It is true patients could not describe if they could realize what an expert could detect. Rubber was an insulator, and here let me caution any young dentist against arguing that rubber plates do not injure taste. It may be true that the plate does not cover membranes of taste like the tongue, but the roof of the mouth has its office to perform on this line. Insulation was most objectionable, and that means more than can be imagined.

Thermal changes during eating are of importance and natural. The portion covered by a rubber plate might as well be paralyzed as to be so covered. The smooth surface of a plate of any material is unnatural, but when no changes, electrical or caloric, are felt, taste is impaired, besides the abnormal condition of the surface covered, which I have not been able to correct by black rubber.

Please understand that I am not advocating disuse of rubber. If I was working at prosthetic dentistry I would use rubber according to circumstances. It does no material injury, but is annoying, as above stated, and I am giving the facts relative to each material.

Swaged aluminum plate, teeth mounted with rubber, was the next on trial, and at once overcame all objections. To say nothing of its light weight, the metal seldom produces electro-chemical action by anything taken into the mouth. It occupies a neutral position, as compared with gold or silver. The latter is a positive element, and gives a metallic taste, as before stated, by carbon, sulphur, etc., while gold is a negative factor, and consequently it becomes a receiver of the electricity which is generated during mastication and mingling of the positive and negative elements of food. Electricity is thus generated, as it would be in mixing elements in the laboratory. Without a metal

in the mouth the electricity is what might be called organic, not polarized. It is the agent which adds delicacy to taste, also that which prompts natural selection of food to be eaten in pairs, as sweet and sour, in lemonade, acid and alkali, soda water, charged waters, roasted or broiled meats, roasted coffee, peanuts, etc, are negatives to saliva, and cause a natural current of animal electricity. This prepared food is taken into the stomach, and the mysterious process of digestion completed, materialization of the elements, the waste product is cast off, the electric vital energy is stored up in the muscles for work. Excuse this digression from the oral cavity. The truth of this will some day revolutionize physiology and establish digestion upon an electrical basis.

Now we are ready to advance another declaration. That metal in the mouth converts organized electricity into physical electricity. The effect is this, when such an unnatural current is discharged at a given point tissue or dentine is injured. Aluminum is almost free from potential, thermal changes and electricity pass readily through the plate without injury, so with gold when it rests upon membrane. This will be taken up again.

The next trial plate was of cast aluminum for experimental purpose. In order to cast aluminum I slightly alloyed it, and my first experience in wearing the plate was interesting and amusing. The plate was a full upper, except the second molar on each side. To increase the bite, and to prevent the molars from elongating a cap of the metal covered the coronal surface. The case articulated with a bridge on each side below. The plate was inserted in the afternoon, nothing remarkable was noticed except the metallic taste thought to be due to finish, etc. In the evening I went up in the street, and to my surprise all the street lights in sight flashed, and were unsteady. As all were affected alike I concluded the cause was the Central Station. It was not

many minutes before I could produce the flickering at will by closing my teeth. On opening the jaws enough to give space the lights were steady. By involuntary action the electric shock affected the optic nerve and produced the effect. The gold became charged, and on contact discharged and gave a shock. Burring out the metal and filling in with vulcanite corrected the trouble. But the cast metal was discarded for a rolled and swagged plate, which to me or for me, is the most comfortable plate, I have worn, and, in fact, it has very few objections.

To be fair with the cast metal I will say for a single plate, where, there would be no gold opposite, I presume the alloy would not be objectionable. In my own case, with a large surface of crowns below, and tongue connecting the two metals, a metallic taste was ever present.

The second tri union meeting of the Maryland State Dental Association, the Washington City Dental Society, and the Virginia State Dental Association will convene in Baltimore, June 2, 3 and 4, in the Dental Department of the Baltimore Medical College, corner Howard and Madison streets. Eminent practitioners from many States will be present to clinic and read papers. The profession is cordially invited.

W. W. DUNBRACCO,

1023 Edmondson Ave., Baltimore,
Cor. Sec'y. of the Maryland Association.

F. F. DREW, President.

Submental Splint.

A good splint to receive the pressure of the bandage and support the lower jaw, in case of fracture of that bone, is made by moulding a sufficiently large piece of modelling compound to fit over the chin and back to the rami, or as far as judgment dictates. This can be done by simply holding the warm material to place with the hand, shielded by a piece of paper or cloth. A.

CHICAGO CORRESPONDENCE.

At the recent meeting of the Chicago Dental Society the annual election of officers was held, and the president's address received. Contrary to old custom Dr. A. H. Peck, the society's past president, diverted from the old trodden path, and instead of reading a tedious resume of the past years work, gave the society an essay on the new disinfectant Formaldehyde.

This innovation in showing his appreciation of the value of the society's time as well as the superiority of a scientific paper, over a recapitulation of things, caused him to receive flattering compliments of those present.

The paper was an excellent one, full of good, original investigation. Dr. Peck proved conclusively that the assertions that Formaldehyde was nontoxic and disinfectant were decidedly wrong, and that while it certainly contains antiseptic properties, its local application produces marked toxic symptoms on the soft tissues, angry sores, and very severe inflammation; applied as a dressing in the roots of teeth, in all of his cases the results were unqualifiedly bad, severe inflammation and marked swelling being the usual result after an application of twenty-four hours.

The doctor also cautioned those who might intend to use Formaldehyde Vapor for a disinfectant of sick rooms. The gas being very irritating to the cornea mucus linings of the trachea and bronchial tubes, and insists upon the necessity of the thorough ventilation of such rooms before they be re-occupied.

The paper was highly appreciated, the discussion was complimentary, and most of the statements were corroborated by those who had made similar investigations, all denouncing its usefulness in the dental office.

I cannot refrain from calling attention to a few remarks recently made in the *Medical and Surgical Recorder* recommending that every society should appoint an editorial

committee which should reject every paper not of suitable length or interest with the same impartiality as if it were presented for publication; better yet, the association of journals should be delegated the power and privilege (and exercise it) of cutting from all articles all repetitions and useless padding, attempts at self-advertising or proprietary medicine puffing.

I should like much to see this or a similar set of rules introduced into our various dental societies, and I think that hardly anything else in the way of a change to awaken the interest and attendance at their meetings would abound with greater beneficial results. We all know how disheartening it is to the *real busy* practitioner after a hard day's work to break away from his family ties, and attend a late and distant meeting, to listen to a lot of useless repetitions of matter so thoroughly discussed that it almost seems that the students before entering college ought already to know all about them; it would surely be a great stimulus to those who are now regular attendants at our meetings, and more so to those who are not, to know that nothing but well deserved material will be introduced at the meeting to satisfy their scientific appetites, and the date of these meetings would be looked forward to by all with eagerness.

It is hoped that some of the societies will accept this hint and will use it to the best of their advantage.

Yours truly,

H. H. S.

How to Make a Clean Model.

If you want a nice, clean model from impressions taken in wax, such as for bites, coat the wax impression with sandarac varnish, and after it is hard wet the surface just before pouring the plaster for the model. It will make a clean, polished model, and separates very easily when the wax has been softened in warm water. The result will be most satisfactory.

D. D. A.

Oil of Cloves and Cataphoresis.

Dr. Harvey N. Jackson, in *Dental Cosmos*, says:

A lady presented herself with left lower second molar, large mesio-occlusal cavity, filled with an amalgam plug inserted originally six months ago. Thermal changes caused constant irritation, and finally continued odontalgia. Upon applying to her dentist for relief, the filling was removed, tooth treated and refilled. Irritation continued from thermal changes until patient came under my care. Removed filling; chamber full of amalgam; posterior root filled with cement; buccal fibril of anterior root exposed and very sensitive and angry from long-continued irritation.

"Twas filled by advertiser B.,

Who gives a written guarantee."

Applied cocain and electrode, with mild current, for one-half hour; tooth still aching. Removed electrode, found pulp as sensitive as before; applied current again for fifteen minutes, with same result. Removed electrode and cotton, dried well, and applied small pellet of cotton with oil of cloves; placed electrode upon it, and instantly pain ceased. Current was not continued over four minutes. Removed electrode and cotton; no sensation whatever remained. Canal cleansed, filled, and filling replaced. Patient went out for luncheon and returned for another operation. Her report was, "The first time in six months I have eaten a meal with comfort."

Oil of cloves is a favorite medicine with me, and I use it in connection with my cataphoric instruments with great satisfaction to myself and to my patients."

Strengthen the Teeth.

In partial cases the teeth on the models so often get broken. This annoyance can be easily averted by placing a tack in the impression of each tooth before the plaster is poured for the model.

The Georgia Meeting.

June 7th is the date, and St. Simon's Island is the place. Now for a rousing meeting. If there ever was a time when all the dentists in Georgia should come together, this is the time and this the place.

The officers in charge are sparing no pains to have a splendid program, one which will offer papers that will furnish "food for reflection" for the next year to come, and clinics that will distance the expectation of the most ardent admirers of the practical. In fact this meeting will be almost if not quite as instructive as a post-graduate course. Dr. Wilson, the honored president of the society, will present in his president's address, a paper, the like of which—for its literary caste, its ornate verbiage, its high superlatives, its picturesque descriptions, yet practical illustrations, bringing into strange harmony all the flights of fancy, the speculation of theory, the philosophy of science and the commonplace methods of routine office practice,—has not yet been given to the dentists of Georgia.

While I write this, the wires are at work between the capitals of Spain and the United States, and upon those wires is suspended the destiny of an island, the fairest on the bosom of the Atlantic! the war ravished Cuba, the greatest of the Antilles. Of course no man can say what a day may bring forth. It may be that the heavy clouds which now dim the eastern horizon may grow into a realization of all the horrors of a foreign war. In that event it will be doubly interesting to the Georgia dentists standing upon the sandy beach on the ocean's edge to witness, without the aid of glasses, the magnificent spectacle of a genuine naval battle, not equaled when the Persian Xerxes saw his great fleet fall before the fury of Themistocles in the bay of Salamis. It may be that the genial Jack Cluney will favor us with a Spanish-torpedo flotilla on the half shell for breakfast, roasted battleship for

dinner, or scrambled cruiser for supper. Can such a *menu* be found anywhere else in Georgia?

This same St. Simons has some history, in which both Spain and England figured, before the Union was born. Here the wily Spaniard disputed England's right to much territory now in the commonwealth of Georgia, and sought to drive the latter from the islands. Many bloody battles were fought, and a naval engagement took place in the very waters through which our dentists will pass, in which the Spanish were defeated and driven back into Florida, at that time Spanish territory.

Well, we'll quit talking about war. Come for the sake of your profession, and come for the sake of seeing the ocean, the great Atlantic, whose crested billows have washed the snow white sand for ages and ages, whose magnificence is incomprehensible. "Ever restless in her vast confines," and superb in her vastness, she makes man feel the utter insignificance of self.

"Roll on, thou deep and dark blue ocean, roll!
Ten thousand fleets sweep over thee in vain,
Man marks the earth with ruin: his control
Stops with the shore."

O friend, that is the way the immortal Byron saw it; surely you will not miss such an opportunity. A.

First use of Mallet.

*In the AMERICAN DENTAL WEEKLY of March 31st, 1898, I noticed on page 363 that Dr. Atkinson was credited as being the first to use the hand mallet to pack gold—1863. I was a student and assistant of the late Dr. Atkinson, beginning in 1855, and now have an ivory mallet which I used in the Pennsylvania College of Dental Surgery, 1858—so Dr. Atkinson must have been using the mallet as early.

Respectfully,

C. R. BUTLER.

Cleveland, Ohio.

Dental Chemistry.

From a Paper by Dr. Chas. A. Bland, Charlotte, N. C., Read at St. Augustine Meeting.

It has frequently been asked: "Is it necessary for a dentist to study chemistry?" There are many, no doubt, who consider the time devoted to this branch as lost. They do not stop to think that chemical action is constantly taking place. The mouth is a veritable laboratory. Unless we have some idea of the wonderful forces which slowly but surely are producing changes and variations innumerable, how can we hope to make judicious selection of filling materials; how can we combat the ravages of caries and the inroads of abrasion? It may not be possible for every student to become a thorough chemist. The subject is too vast to be mastered by one who does not make it a specialty. However, it is necessary for him to be familiar with that part of chemistry which is intimately connected with the practice of dental surgery. He should be able to make a thorough analysis of the oral secretions, independent of the simple mechanical methods adopted by the dentist. The oxyphosphates may be taken up in this connection and their durability in mouths showing different reactions should be carefully considered.

There are many operations in daily practice where an understanding of chemistry would be decidedly advantageous. For example, the process of bleaching teeth with pyrozone solutions. He once saw an attempt made to bleach a central incisor which had a corner restored by a large contour filling. The tooth was stained green and was very unsightly. Several applications of pyrozone were made, but there was no perceptible change in the discoloration; at first he was nonplussed, but a few days afterward while reading a pamphlet on H_2O_2 he noticed the following explanation: "When nickel posts or screws have been used to hold frail walls in building down

these teeth and a green metallic stain is presented from the salts of nickel, cut them off. Pyrozone will not bleach nickel, and chemistry has no agent yet discovered which will turn this green to white in teeth."

Elongated Upper Molars.

It often happens that the upper molars are elongated to such a degree as to prevent the use of antagonizing molars upon a lower partial denture.

This difficulty can be utilized to the decided advantage of the patient.

Let the base-plate be of modeling compound or Ideal, to give rigidity. Mount soft pieces of wax upon the base-plate and have the patient close the jaw naturally. The impression of the elongated molars is made in the wax, and this can be duplicated in either Watts' or Weston's metal.

Where these teeth are not only elongated, but present an oblique position, this method insures a more perfect occlusion, and mastication even more thorough than if teeth were employed.

J. A. C.

Going to Japan.

A note from Dr. Louis Ottofy, of Chicago, informs us that he will, next month, go to Japan to engage in the practice of dentistry, and in dental educational work. This not only means that Japan will get one of America's most progressive dentists, but that dental education in that country will be placed upon the very best basis.

For Pericementitis.

A raisin with the seed taken out, and the inside placed next to the gum, is a splendid substitute for the capsicum plaster. In fact, it seems to be more effectual. It must be heated over a lamp or other convenient flame before being applied, and the treatment renewed as often as necessary.

A.

THE
American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

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Subscription \$2.00 per year; \$1.00 for six months—Including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, April 21, 1898.

Dentistry or Stomatology.

The subject of changing the name of the profession was extensively discussed before the Odontological Society of New York. Dr. Stellwagen read an able paper on the subject and gave many good reasons why the present name of dentistry was inadequate. In his paper he favored the word stomatology, as coming nearer meeting the requirement than any other that had thus far been suggested. He gave as evidence that the present name did not cover the field, his observations of articles written purporting to be on dentistry. In 1891, he found fifty-one original articles in the *Dental Cosmos*, and fifteen were upon subjects not strictly dental. In 1892, out of fifty-six articles, sixteen were not dental. In 1893, out of sixty original articles, fourteen were not dental. In 1894, out of seventy original articles, sixteen were not dental. In 1895, out of forty-five original articles, twenty-three were not dental. In

1896, out of sixty-two original articles, sixteen were not dental. In six years about twenty-eight per cent. of the original matter in the *Dental Cosmos* was not strictly dental. He thought the time had come when a term broad enough to cover the field should be adopted.

We are ready to agree that the word dentistry in a strict sense does not cover the ground of our specialty, at the same time, nothing in our opinion has been suggested up to the present time that seems so universally acceptable. The word "Stomatology," is the least acceptable of all that have been suggested. The derivation is all right and it comes nearer covering the ground, but the sound is abominable. As Dr. Foster said in discussing the paper, he had profound respect for dentists, but he did not think he would have any more respect for them if they styled themselves stomatologists.

If the name must be changed, let us wait until we can find a better sounding word than stomatology.

H. H. J.

A Compliment.

While all of the leading dental periodicals have spoken words of praise and good cheer for the WEEKLY, out of this number we note one which is specially significant, and for this reason appreciated.

The editor of *Items of Interest*, defending the policy of his journal in conducting an "Office and Laboratory" department as against the "anonymous correspondence," found monthly in the *Dental Digest*, says:

"The criticism against our department of 'Office and Laboratory' appeared several months ago, and would have received no attention were it not that the DENTAL WEEKLY, by clipping the matter from the *Digest*, has given it an extended circulation." (Italics ours.) Quite right, Doctor. The WEEKLY has bona fide subscribers in San Domingo, Italy, Switzerland, France, Germany, Nova Scotia, and nearly everywhere else.

J. A. C.

An Eastern Branch of the National Dental Association.

It is probable that there will soon be an Eastern Branch of the National organized.

From what can be learned there will be some opposition to the move, many holding the opinion that there should be no branches at all.

Of course, when this proposition of combining the Southern and American was first made known, the idea then was to have Eastern, Western, and Southern Branches. The combination was effected with the understanding that the Southern should not be required to disband, and that these other branches would be afterwards organized. Should an Eastern Branch be organized it will only be carrying out what was first intended by those most active in forming the combination.

Opposition is now springing up to any branches at all. It is very probable that the Southern Branch will soon be asked to consider the further question of disbanding entirely. The Southern was first persuaded into becoming a Branch association, taking on the extra burden of paying a per capita tax to the higher body, which it quietly submitted to. Though the combination was *quietly* formed, no opposition apparently existing, still there *was* opposition. If now, within less than a year and before the higher body has ever held a single meeting, the Southern, which is now reduced to a branch, be requested to shut up business entirely, it may be that the members might get the idea that all this was intended when the Southern was solicited to become a party to the combine. If it should develop that the combination was a deep laid scheme to exterminate the Southern, the result that this development might have could not be foretold at this time.

It may be accepted as true, however, that nothing of this kind was behind the combination. Those who took the most

active part in the work are not given to doing things in an underhanded way. The harm which the existence of branches might cause has, doubtless, been an afterthought with those who are opposed to them. If it can be clearly shown that any and all branches are hurtful to the best interests of the profession at large, it is hardly probable that the Southern's members would want to block the wheels of progress. But knowing the endearing ties which exist in the hearts of many of the older members of the Southern, it may be safely said that before a consent could be obtained to relinquish the last claim which keeps the old association intact, it would have to be conclusively proven that its existence was indeed a stumbling-block and a hindrance to progress.

It is not the object of this article to express a thought for or against the existence of branches, and the Southern in particular. It may be best not to have branches, we are not prepared to argue the question pro or con., but if it should be conclusively proven that any branches at all are hindrances, then we ought not to have them. We shall await further argument from the opposition.

H. H. JOHNSON.

That Amalgam.

American Dental Weekly:

I am in receipt of a letter to-day in which it is intimated that the analysis, which I published in your paper, of the "Only Perfect Alloy" (Fellowship), was said to be not correct.

In justice both to you and to myself I would say that a sample was taken by me from a *previously unopened original package* (envelop) of that alloy and that the analysis sent you *was made by* Messrs. Booth, Garrett & Blair of 404, 406 Locust street, Philadelphia. This was done as a "corroborative analysis" to mine, made by the "setting" and "color" tests, which gave

me silver 65 to 70, tin 25 or so, copper 5, zinc 1 or \times —.

As I have not for nearly ten years used *fractional parts* either in analyzing or making amalgam alloys, you will note that my "test analysis" was a *sufficiently close guess*!

Booth, Garrett & Blair "Test Analysis."

Silver	67.73	Silver.....	65 to 70
Tin	26.33	Tin	25 or so
Copper	4.71	Copper.....	5
Zinc.....	1 23	Zinc	1 or +

Truly yours,

J. FOSTER FLAGG.

New York Institute of Stomatology.

At the next meeting of the Institute, May 3d, "The Relations of Journalism and of Secrets and Patents to Professional Development" will be discussed.

Papers on Journalism will be contributed by Drs. Louis Jack and Wm. H. Potter, while Drs. B. Holly Smith and J. M. Howe will submit papers on Secrets and Patents.

The well known ability of these gentlemen insures an exhaustive, interesting and profitable discussion of subjects which for a long time have claimed the attention of the profession.

As we have given expression of our views, in a casual way, on dental patents as affecting the ethics of dentistry, we look forward to the results of this meeting with some interest.

A Good Investment.

Moulding sand is preferable to marble dust or pumice for investment. It holds its shape better and does not glaze on the porcelain under heat. A.

Thanks to our friend, Dr. W. Geo. Beers, editor of the *Dominion Dental Journal*, for proof-sheets of the transactions of the Vermont Dental Society. Such an editorial courtesy is appreciated.

The Bite.

It is so seldom that we see a good theory applicable to prosthetic dentistry, the article in the *WEEKLY* of the 7th inst. particularly attracted my attention, and it is with an idea to commend much of it and to add a little to it, that I write. I shall criticise a little of it, however. I do not think it advisable or necessary to oil an impression or flask to aid in their separation. It is a dirty way. The idea of separating the model from the impression by use of hot water is first-class, and one that I have used for a long time. Towards the end of the article the writer says, "Median line should be marked." Right he is. He also says, "A few lines should be drawn in the region of the bicusps and molars so that the bite-plates can be properly placed on the models."

I have a much better and safer way of getting the bite-plates on the models. When the plates are in the mouth and in proper position, I lock them together with what I call bite-locks, a little staple-like contrivance made from iron wire or hair pins.

The cut will show. it I make the staples with a twist, and a handle, whereby they are easily handled. After the plates are locked together in the mouth both are removed together, and there can be no doubt of their relative positions.

J. A. ROBINSON.

Morrisonville, Vt.

Rules for Membership in National Dental Association.

Editor American Dental Weekly:

In the next issue of the **WEEKLY**, will you please call attention to that section of the by-laws of the National Dental Association, which relates to the appointment and qualifications of delegates, which is as follows:

"Article III. Section 3. All delegate members shall be practitioners of dentistry. They shall be received only from permanently organized State dental societies. They shall be elected by ballot at some regular meeting of their society, and shall be members who have done meritorious work for the profession; but no person shall be received as a delegate who is in arrears for dues to this Association."

Also, "Article IV. Section 1. Each State Society may send one for every ten of its active members, as delegates to this Association for one year, upon complying with the requirements of its constitution; but no Society shall be entitled to representation that does not adopt or substantially recognize the Code of Ethics of this Association."

The fact that the American Dental Association received delegates from both local and State Societies, renders it necessary to call attention to the fact that delegates to the National Dental Association will be accepted only from the State Societies, and that such delegates must be elected by ballot at a regular meeting of the Society."

By request of the President.

EMMA EAMES CHASE,

Cor. Sec'y National Dental Association.

To Stop Hemorrhage.

I have stopped severe hemorrhage after extraction, by applying a pellet of cotton, saturated with persulphate of iron to the seat of disturbance, and then syringing freely with cold water. Try this. A.

New Law of the "Hornets."

Have you read the new dental law of New Jersey? No? Well, you have something to live for and to profit by. It is a "sure enough" dental law, and judging from its complex character, was drafted by a most skillful devotee of Blackstone. It is an instrument which not only protects the profession and the public of to-day, but seems to anticipate every possible contingency for the future. Its restrictions, requirements and penalties are of such a nature as to strike with holy terror the would-be violator.

A synopsis here would prove totally inadequate to a proper appreciation of its many wise provisions.

If you contemplate an amendment to your present law, or desire an entirely new statute, we commend the New Jersey idea as an eminently worthy model.

We congratulate the "Hornets" in setting the pace, and wish them the long and full enjoyment of the rich fruit of their labor.

J. A. C.

To Cool an Investment.

There is no doubt that teeth crack on cooling, after the soldering process, as often as when they are being heated, and perhaps oftener. If, when the case is left to cool, a small box or bucket is placed over it, the cooling will be slower, but more uniform, and will give better results; there is no doubt that the cool air striking the case while still hot has much to do with checking the teeth.

ATKINSON.

Watch Crystals.

Go to your jeweler and have him give you a dozen old watch crystals for use in preparing treatments for root canals, devitalization, etc.

Just the thing to hold a few drops sulfuric acid and bicard soda solutions when enlarging root-canals.

Or to warm a few drops medicine by simply holding the crystal over alcohol flame a moment with plyers. E. H. L.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2 00 Per Year, including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., APRIL 28, 1898.

NO. 33.

ON RECENT METHODS IN THE TREATMENT OF INFLAMED PULPS.

Dr. H. Bönnecken, professor at the German University at Prague, writes in the *Oesterr.-Ung. Vierteljahrsschrift* very extensively and interestingly on this subject.

Having given some older methods of preservation and devitalization of pulps due consideration, he tells of his experiment with the formaldehyd, which latter he believes to be an excellent medicament for the treatment of pulps. Next to carbolic acid and bichlorid of mercury, he says there is scarcely another medicament which has found such an extensive general use as formaldehyd, its coagulating and disinfecting properties are beginning to overshadow the former two entirely. Formalin in $\frac{1}{2}$ per cent. solution causes albumen to coagulate instantly; the tissue hardens, but does not shrink as it would if treated with alcohol. It has been given the preference to the latter in the preparation of anatomical and histological cuts, owing to these facts. The natural color of the cuts being preserved, makes the formalin still more valuable.

The process of coagulation of protoplasm takes place so readily that in the course of a surgical operation lasting half an hour a cut of an object can be made and the same can be thoroughly examined before the operation is finished.

The disinfecting property of the formalin is an extensive one. The French bacteri-

ologist, Pottevin, has experimented in that direction and proven the following:

Formalin kills by 16° C.—

In 15 per cent. sol. certain bacilli in 1½ hours
In 42 per cent. solution..... in 1 hour

By 35 per cent. C.:—

In 15 per cent. sol..... in 80 minutes

In 42 per cent. sol. in 15 minutes

By 52 per cent. C.:—

In 15 per cent. sol..... in 5 minutes

In 42 per cent. sol. in 5 minutes

In 5 per cent. sol..... in 15 minutes

This shows that a 2 per cent. sol. is as effective as a 10 per cent. solution of chlorcalcium or a 1-100 solution of bichloride of mercury.

In dental practice formalin was first used in 40 per cent. solutions in the treatment of pulpitis. A pellet of cotton with some formalin was put near the pulp and the cavity closed permanently. This treatment was followed by intense pain for several hours, after which the tooth felt comfortable.

Dr. Lepkowsky's experiments on dogs led to the discovery that formalin, like arsenious acid, cauterizes the pulp through sound dentin. The tissue, having been in contact with the formalin, was found hard after 24-72 hours, while other parts remained normal. Extreme carefulness in the use of the stronger solutions is therefore at the place, formalin will cause devitalization of the pulp; even weaker solutions for obtunding purposes, if used too often and too near the pulp, can be detrimental to the same. The effect of formalin in such cases is characteristic; the death of the pulp is a

slow one, not accompanied by any pain and not discoloring the tooth in the least, because its preserving the coloring matter of the blood.

The observations of the action of the formalin on living pulp tissue led Professor Böunecken to use the same in the treatment of pulps after devitalization with arsenious acid. He began to treat all molars and bicuspsids with acute and chronic pulpitis in the following way: Two days after application of arsenious acid he removed the crown portion of the pulp, washed the chamber with a 40 per cent solution of formalin and closed up a little pellet of cotton, saturated with the same solution, with cement. On the latter a permanent filling was put at the same sitting. Fifty cases were treated in that way with exactly the same result. Pain ensued directly after application, continuing sometimes for four hours. After that the tooth felt permanently comfortable. The long period of pain was of course a great objection; the solutions were therefore gradually diminished in strength until a 5 per cent. solution, with the addition of cocain, brought forth excellent results. Dr. Böunecken gives his preparation as follows:

R Cocain	} aa	1.0
Thymol		
Mix thoroughly 40 per cent. aqueous sol.		
Formaldehyde	gtt X
Zinc oxid qu. suff. to make paste.		

Five hundred cases were treated with this preparation in the way described above. Five per cent. sol. of formalin was used instead of 40 per cent. to wash out the pulp chamber. Sometimes, by completely anesthetizing pulps, above mass could be pumped up in the canals with a broach.

Dr. Böunecken describes this method as an excellent one, being thorough, simple and quick, but he says that as the time for a record is too short he believes the old method of extirpation of pulp, followed by complete filling of canals, is the only reliable one.

THE OTHER SIDE OF CHEAP JOHNISM.

Referring to an article on gold crowns *vs.* fillings, published in the issue of April 14, your Chicago correspondent begs leave to state that he materially differs from some of the sentiments and deductions which the writer of that article makes.

The idea that the patients are becoming more distrustful day by day of dentists, I surely cannot believe to be anything more than theory. I do not believe that the public is losing faith in honest practitioners, and I am quite certain that that is not the case in my own practice, nor in that of many others with whom I am personally acquainted. In stating the reason for this alleged distrust, I believe that the writer has put the cart before the horse. He gives two examples where patients mistrusted honest practitioners and had their work done by advertising quacks instead, only to find that had they followed the original advice of their dentist they would have been vastly better off. I think that if these people really went to "dental parlors" on account of any doubt in the integrity of their dentists, they and their intimate friends will soon have learned a lesson which will insure their greater confidence in honest men.

If the advertising dentist resorts to such dishonest means to put on bungling cheap crowns instead of well advised and more conservative work, they will do the public as well as the dental profession a vastly greater good service than they have ever done before, and instead of creating mistrust in honest men on account of the cheapness and seemingly greater amount of goods delivered, will soon convince the erring public that if mistrust is to be placed anywhere it is to be placed in *them*.

I for one hope that these advertising men will cut the price of their two dollar crowns to fifty cents, and if possible in the next

year put on ten times as many as they have during this one, as I know of no means which will quicker and more effectively convince the public that there are two entirely different classes of dentistry—one honest and the other dishonest.

Two or three years of such practice might be sufficient to impress these erring patients sufficiently to drive the "dental parlors" to other shores. I believe that the existence of dental parlors are more conducive to the creation of *confidence* in *honest* practitioners than they are conducive of *mistrust* in *them*, but in all other respects their disgraceful existence is only proof of the *youth* of our country. Such a state of professional quackery does not exist in the *old* country, and the quicker these men succeed in the line above referred to, the sooner will they end their own existence, unless some good dental law comes in before that time and invites them "shortly but firmly" to vacate.

H. H. S.

FROM CHICAGO.

Editor of the American Dental Weekly:

If Chicago were not so large, and did not do so many things, it might be easier for a correspondent to know where to begin. Occurrences follow each other in rapid succession here, and professional occurrences are no exception.

But probably the most interesting bit of professional news just now relates to the anticipated departure of two of our respected practitioners—two men who have something more than a national reputation in dentistry. (Shall I be drawn and quartered by certain wise men of the East for not calling it stomatology?) Dr. Louis Ottofy leaves Chicago in May for Tokio, Japan, and to mark his appreciation of Chicago dentists, (stomatologists?) and particularly of the members of the Chicago Dental (Stomatological?) Society, he publicly presented that body with his fine library at its April meet-

ing. This is magnanimity and professional spirit of a high order, and a committee was appointed to make suitable recognition of it. It has just occurred to me that you might secure him for your Japan correspondent, and I feel assured if you employ on him the same persistent and delightfully persuasive influence that you did on the present chronicler, that Ottofy with all his great good-heartedness will surely yield. I, in fact, already find myself looking forward with no small degree of pleasure to Ottofy's letters from Japan. I charge you nothing for this suggestion. (I merely keep out of the way of Ottofy's club for having made it.) It is needless for me to say that Dr. Ottofy carries with him the best wishes of his fellow practitioners in Chicago.

The other gentleman referred to—and I approach his name, in the light of his leaving us, with a feeling almost akin to bereavement—is no less a man than Dr. George H. Cushing. Dr. Cushing's health in recent years has been so impaired that he is finally compelled to give up practice and seek a more moderate climate. He expects to leave in a few weeks for California.

And now, Mr. Editor, I wonder if it might be accorded me with propriety, to say a few words in appreciation of this man. I had intended merely making the announcement of his departure, and restraining myself from an expression of my individual sentiments regarding his many noble qualities, but the impulse will not down, and I must out with it. A good friend of mine once remarked to me after I had opened the discussion on a paper: "You would make a very fair speaker before a society if you didn't pay so many compliments to the essayist." Well, God knows, I would rather find myself paying a compliment every minute than prodding a sore point once a month, and if I see anything good in a man I claim an unalienated right to speak of it. And I do not want to wait till he is dead to speak of it either. We are too inclined to be sparing of our commendation while a man is living, and

then rush in at his death and pour out our maudlin sentiment over his unresponsive clay.

But of Dr. Cushing there are so many things good to be said that the dilemma lies in knowing what to say first. Above all, he is a professional man and a gentleman—one who has done more for dentistry along certain lines than any man of his generation. Ask the members of the American Dental Association what he has accomplished for that society, and then listen well to their answer. Look at the records of the Illinois State Society and see what a story they tell—an uninterrupted attendance from the first meeting to the last, of more than thirty consecutive years! Ah, ye of little faith, what an example is this for you! And then his individual traits—dignity, professional honor, generosity, cordiality, and a fine sense of what is everlastingly right, with no compromise from that quality. Above all his loveable and abiding friendliness—what wonder that we who are privileged with his daily companionship have grown to call him “Dear old Uncle George.” May he live long enough to fully realize how much we all love him.

C. N. JOHNSON.

Reproducing Gum Tissue.

A good deal has been said of late about reproducing gum tissue by local irritation. It strikes us that gum tissue, reproduced in that way, would be undesirable in the mouth, as long as it remains the product of irritation, and it strikes us that as soon as the exciting cause of its growth is removed it will resume its original shape.

This is the way it looks to us.

ATKINSON.

Ammonol for relieving pain has been suggested by Dr. S. C. G. Watkins. He administers fifteen grains in cases of periostitis or pulpitis and gets a very satisfactory result. It quiets the pain and prevents the loss of sleep from that cause.

SWAGING METALLIC PLATES.

Dr. A. N. Dick, in *Pacific Gazette*, suggests a unique and economical method of metal swaging.

Dr. R. Mathews, in *The Cosmos*, vol. xxxviii, page 647, says that he uses a die metal, composed of forty-eight parts of bismuth, thirteen of cadmium, and nineteen of tin, and that it may be poured into a fresh plaster impression without waiting for it to dry.

He also states that for a counter-die he uses common modeling compound. That he softens it and places it in a ladle and drives his die into it, after which he cools it till it is hard and then swages his plate. That after using three or four counters made of the modeling compound he finishes with the shot method.

The alloy melts at a very low heat, and expands in cooling to make the outlines of the impression quite sharp.

To make the die, build up the impression with plaster into the form of a cup or mold about a half inch above the rim. Place on this rim an iron band half an inch wide and lute around with plaster, and pour the metal into the impression.

To make the counter-die use an ordinary moulding ring, filled almost full of modeling compound, made quite smooth on the top. Turn the ring upside down in boiling water till the compound is softened half way through. Then force the die into it up to the lower edge of the iron band and with the fingers press the soft compound to the die all around. Harden the compound in cold water. If one counter-die is not sufficient, another can be made in a few minutes.

Dr. Mathews expresses the opinion that the swaging cannot be completed with the counter-die made of the modeling compound; but I beg leave to say that a plate, either gold or aluminum, properly annealed, can be brought into contact with the die

with no other counter than that made of the compound.

By this method the work is so simplified, and the time so shortened, that the impression may be taken, the plate swaged, and the wax ridge for taking the bite built up, and the bite taken, at one visit of the patient.

A few weeks ago a gentleman came in with a well-fitting rubber plate, saying that if I could make a gold plate that would fit as well as it did, he would have one made. So, instead of taking an impression of his mouth with plaster, I took his plate and prepared it for making a die and poured the metal into the plate, and with that die and two counters, made of the compound, I swaged a gold plate. The work was quickly done, and he says that the suction is perfect.

There are two points essential to success that ought to be emphasized. One is that the die must have an iron band around it; otherwise the force of the swaging hammer will split it. The other is, that the compound should not come above the edge of the iron moulding ring; otherwise it will break away.

The fusible alloy costs about \$2.65 per pound; but that is a mere bagatelle when compared with the time and labor saved.

Mr. Editor:

Will you, or some one else, give us through the WEEKLY the latest and up-to-date method of repairing vulcanite plates? We don't want that kind you read about, that some other says is good, but we want the method practiced in your own laboratory. Now don't say this is too simple a question to deserve a reply. It is an every-day, practical question, and we want it answered.

D.

An exchange says: "A dental parlor is a drawing room." That is a good pun, but what becomes of the fellow who gets drawn?

NEW YORK CORRESPONDENCE.

NEW YORK, April 10th, 1898.

Editor American Dental Weekly:

The metropolitan district covers so much territory that it keeps one busy all the spare moments in making connections from one section of it to the other, which accounts somewhat for our tardiness and the spasmodic way we have in jotting events to you.

The April meeting of the Institute of Stomatology occurred on the 5th inst., at which the worthy President, Dr. Bogue, conducted proceedings. Dr. Geo. A. Maxfield, of Holyoke, Mass., came to town for the purpose of presenting the subject of "Hypercementosis." He showed some specimens, with a history of symptoms, etc. From the doctor's remarks we gleaned that he has never made an error in his diagnosis of these troubles, which have been regarded by most of us as of such an obscure character that it was difficult to determine even dental disturbance, especially as there are no external or local evidences of the trouble to guide one. No discoloration even upon transmitted light, no looseness of tooth, no swelling of gums, and but infrequently any enlargement of alveolus. He presented a number of cases, all with some history, and several with complete history. One in particular he believed he was accountable for the original disturbance which eventually resulted in the loss of the tooth. The patient presented at college where the doctor was a student, a tooth to be filled, the cavity in which was not unusual, but in the insertion of the gold a heavy malleting force was used, which occasioned some soreness. This condition disappeared for sometime, being followed later by neuralgic pains which were persistent. Finally the doctor extracted the tooth only to find as he had anticipated, an exostosed (hypercementosed) root.

The president next introduced Dr. James Ewing, of the Department of Pathology,

College of Physicians and Surgeons, who made some very interesting remarks on "The Minute Structure of Dentin in the Light of Recent Investigations." He cited Dr. Morgenstern's case of a successful demonstration of the non-medullation of the nerve fibres in dentin and that it has been proved most conclusively that the tubules are lined by endothelial cells. Round nuclei were found, which previously had not been explained. Probable significance of these structures, they not only demonstrate the non-medullation of nerve fibres, but also nodule thickening, with possible lymph spaces existing which if they could be demonstrated, would go far to clearing many problems heretofore obscure.

The essayist of the evening was Dr. J. L. Wortman, of the American Museum of Natural History, New York City, who discoursed on the "Relationship of the Dental Organs to the Doctrine of Evolution," which he illustrated by lantern slides. He explained how extinct forms of animals were found in stratified soil, which was the deposits of river or lake beds, thousands upon thousand of years in forming, which in the processes of nature had become drained of their waters and been rent asunder by further processes disclosing the stratified nature and the remains of fossil animals, etc.

Fully 75 per cent. of these extinct forms, he says have only been recognizable by the dental organs which have been the only parts to remain intact.

His illustrations of comparative dentition were excellent, especially of the camel, the sloth and the horse. He gave a history of transition and evolution of camel and the horse. Every link in the chain of evolution of these two animals is intact so it is claimed, not a break anywhere.

When asked what he had to say about the missing link in the Genus Homo—his reply was that he could but reiterate what Prof. ——— said when asked the same question: "Gentlemen, I do not bring be-

fore you an unbroken army of new recruits and pass them in review shoulder to shoulder with unbroken ranks, but rather a lot of old veterans, battle-scarred and torn, with immense breaks in their ranks, straggling along in broken file."

The May meeting of this society, it is expected, will be ahead of anything yet done by it. We hope to give you a complete epitome of it.

The annual election of officers for the first District Dental Society occurred this month, hence no papers. A very enjoyable time was had at the collation after the business meeting. This is the society as far as being a legal representation of the dentists, and is the source from whence the "odontological" and "Institute" gain members from time to time.

Three full-fledged Dental Societies in "Manhattan"—some think it too many, others think there is room for all three; time alone can tell.

A direct attack was made upon what is known as the conservative treatment of the pulp by Dr. M. L. Rhein, of New York, in a paper read before the Central Dental Association of Northern New Jersey, at its meeting March 21st. The Doctor advocated the more frequent removal of the pulp even when not exposed and his arguments in favor of such a procedure were good. The general consensus of opinion of those present was to the effect that the essayist was about right. A leading New York dentist made the remark that his (Dr. Rhein's) remarks were revolutionary, but there was much that demanded attention therein.

By the way, New Jersey has a new dental law and we judge there will be some fun ahead. Among other things it is aimed at the various Dental "Parlors" and "Associations."

The new law requires them to make certain monthly reports, exhibit a list of names of those employed, etc. We understand that they have secured two of the ablest

lawyers in New Jersey and intend to contest the law. There are some things in it which seem rather overdrawn—unconstitutional—and there seems to be a likelihood that the "Hornets" may have overreached themselves. We hope not, and are very much interested in the outcome.

In this same connection, the new law has a provision whereby one who has a legal right to practice in another State, whose examination is equal to that of New Jersey does not have to pass a New Jersey examination to practice. This is a step in the right direction, but we fear it will not work as desired, as witness this case: A gentleman who graduated well up in his class in a respectable leading dental college, has the necessary license to practice in a prominent Western State, has practiced there sometime, is also an M.D., now practicing in New York as an associate of one of the most prominent dentists of Manhattan, *will not be permitted to practice in New Jersey, even under the new law, unless he passes an examination there.* That is the dictum of the New Jersey board to date, and all this despite the fact that he has all the legal right to practice in the State of New York. It reminds us of the remark of the yankee boy, "whats the use of nuthin."

A medical society in Brooklyn—the "King's County Medical Society" we believe is the title—recently had as its essayist a leading physician of Brooklyn, a Dr. Tuttle, whose paper was upon *amalgam* and some of its injurious effects, taking his own case as an example. He was very outspoken in his opposition to the general use of amalgam on the ground of mercurial poisoning, etc. Among those who opposed his theories we noted the names of Dr. E. A. Bogue, of Manhattan, and Dr. A. H. Brockway, of Brooklyn.

There were other dentists who took part in the discussion as well as the physicians of the society.

The reports in the public prints stated

that Dr. Tuttle's arguments were not shaken by those opposed to him, while some of those who opposed him say that he offered nothing new, nothing but what had been exploded long ago.

The important point we wish to make is this: Dr. Tuttle is an *allopath*, the "King's County Medical Society" is an *allopathic* society, and nothing in connection with this discussion had to do with homeopathic ideas *per se*.
METROPOLITAN.

The Relation of Osteomyelitis of the Inferior Maxillary with Dentition.

The author says that one but rarely observes osteomyelitis in the lower jaw, in a hospital service composed of adults

With the adult the period of evolution is complete and hence we seldom witness this lesion, except consecutive to dental caries; but in these cases we have a suppurative process superadded. In the child the lesion is dependent on imperfect or tedious eruption of the teeth, a congestion and erosion of the mucous membrane with a penetration of germ infection downward. No doubt in all, independent of the local changes in the tissues, with the advance of the rising tooth there is a cachexia or predisposition, because we find the lesion in some infants before dentition begins.

It is believed that in various cases infection may begin in a buccal ulceration or tonsillar erosion, or after infection succeeding the extraction of a tooth.

NOTE—The lesion briefly described is certainly a very unusual one in this country, and is rarely met with except in strumous, syphilitic or marasmic infants; as a primary affection very rarely indeed. Probably in those with a predisposition to it, in the event of protracted and painful dentition, free scarifying of the gums would serve as a most potent prophylactic. In the adult, however, this lesion is with us by no means

an uncommon one, involving alternately the upper and lower jaws; in the upper giving rise to empyema in Highmore's antrum, with caries, necrosis or perforation. In the lower jaw the spread of suppurative action is limited to a confined area in the alveolar pit, quite generally burrowing through the outer, compact lamina into the soft parts, producing first an abscess and then a sinus.

This constitutes a very important class of lesions for the reason that when recognized early they are always amenable to simple, radical and permanent treatment by surgical measures.—*T. H. M. in Medical Times.*

Care for the Skin.

The skin is one of four organs by which the effete matter of the body is eliminated, and hence needs great care. The first and most important precaution is to keep it clean. This may be done by frequent bathing without soap or an occasional bath with soap. The former is the better plan, for that in no way injures the skin. When our grandmothers were young ladies they used meal instead of soap, which always injures the skin by dissolving a portion of the cuticle and extracting some of the oil from the skin. The very best toilet soap will have this effect, and in the course of time will darken and roughen the skin. The Turkish bath is to the skin the same as a dose of salts to the bowels; it may be good for a sick man, but is injurious to one in good health. Two or three baths a week with clean water, without soap and without too much rough rubbing, is doubtless the best, especially for those exposed but little to smoke and dust.

The next means by which the skin may be kept clean is in the choice of underwear. Flannel should never be worn next to the skin, not even of the finest lamb's wool. Try flannel underwear next to the skin several days or a week without bathing and at the end of the time the flannel

will be surprisingly clean, but the skin will feel greasy to the hand, and will lack much of being clean, and will require soap to cleanse it. In the same way try cotton or linen underwear one week and at the end of the time the skin will feel fresh to the hand, will be easily washed without soap, but the underwear will not be clean. In the former case the perspiration adheres to the skin; in the latter it adheres to the cotton underwear. To make an easy test of this try a flannel, a linen and a cotton towel on your face, and you will find the linen the best, the cotton next, and the flannel a failure.

Underwear should be loose. All tight-fitting or knit goods should be avoided, for the skin needs air, and loose clothing keeps a circulation of it next to the skin by every movement of the body, while knit goods prevent it. To test this try persons whose skin is sensitive, not those whose skin can stand it. Loose cotton clothing next to the skin is comfortable, but if knit or tight-fitting, after one or two weeks wear, even with suitable changes and bathings, produces an itching; loose flannel produces the itching a little more than this, and tight-fitting flannel torments one worse than the winter itch. These facts I have verified by a number of experiments. The itching I judge to be caused by the lodging of the effete exudations on the surface of the skin. I have cured a number of people of what they and their doctors called winter itch by a prescription in accordance with the above. I have no doubt but that babies are often tormented and made sick by the use of flannel next to their skin. With cotton or linen loose underwear and the use of but little soap the skin will keep fresh and healthy, and the person will be but little liable to take cold.—*E. H. Randle, in Times and Register.*

Tribromphenol bismuth is recommended as an antiseptic to take the place of iodoform. Use in combination with other medicines, same as iodoform.

THE
American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Subscription \$2.00 per year; \$1.00 for six months—including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited. The editor is not responsible for the opinions of contributors. Advertising rates sent on request.

Atlanta, April 28, 1898.

Dentistry or Stomatology.

The heading of this apology is borrowed from my friend, Dr. Johnson, of Macon, Ga.

Last week he gave us a few thoughts on the proposed changing of the name of our profession. His comments are based upon a paper read by Dr. Stellwagen before the O-D-O-N-T O-L-O-G-I-C-A-L Society of New York. Dr. Johnson thinks "Stomatology" covers the ground better, and would do, but for the abominable sound of the word.

To me the sound of the word offers slight objections. The greatest trouble lies in what we in America will do with all the *tooth den-isses* which infest the land from Nova Scotia to Lower California, and from Florida to Oregon. Will they be Stomatologists? Really the name sounds too classic for the people I have in mind. For the professional man, it seems well applied; for the mercenary, it is out of place. The nature of an object will give character to a name, and the

name of an object will grow to be a synonym for other objects which partake of its nature. Thus the word *lamb* is the synonym for meekness, and *hog* for greediness, and so on.

Once, while talking to an old farmer, the conversation had drifted into profoundest philosophy, when he said that Adam was the smartest man who ever lived. That he was the one who gave to every animal its name, and that he had named them so wisely. "Now, you take the horse," said he, "It is a strong, portly animal, and the name suits him well; and the sheep, it is as meek and harmless as a lamb; and the hog—now, Adam could not have given it a better name, for it is the most hoggish animal in the world."

My good friend had recognized the intimate relation between the animal and its name, but he did not know that the name had derived its character from the nature of the animal, nor did he know that the man of Eden was not versed in the Anglo-Saxon tongue.

The term "dentist," from the Latin *dens*—a tooth—had for so long been applied to a class of artisans whose only avocation was mechanical tinkering on the teeth, that even up to the beginning of the last half century, and indeed, later than that, it was difficult for a dentist to command recognition among professional men. He had to live down the character which mediæval charlatans had given his profession, and raise it to meet the environments which culture was throwing around it. The scope of the dentist's practice has grown to where the term no longer expresses it. He is called into consultation and to the treatment of all forms of oral diseases. If he knows his business he is an oral surgeon. He has outgrown the ancient avocation of dentistry only. His operations are not confined to the teeth. Hence, this movement toward assuming a more pretentious and comprehensive name. The one suggested carries with it more euphony than Dr. Johnson would seem to think. A coined word,

it is true, not found in the dictionaries; but thoroughly classic, from the Greek *stoma* and *logos*, which in English would mean science of the mouth. It would seem to be a huge undertaking to relegate an appellation which has obtained for so long, but if the change must be made, Stomatology will embrace the idea. D. D. ATKINSON.

Kaiser William and His Teeth

"Toothache has been lately a great source of annoyance to the kaiser. Not that the imperial molars are, so far as I know, threatened with premature decay. Were this the case, nobody would risk the penalties of *lèse majesté* by openly asserting it. The case is, however, from a public point of view, far more serious. It appears that the entire German army suffers from dental troubles to such an extent that it has been found difficult to find non-commissioned officers capable of giving the word of command. When they attempt to utter familiar formula the 'Tention!' 'Stand at ease!' 'Shoulder arms!' and so forth, mere confused and inarticulate sounds issue from their toothless gums. Things are bad enough on the parade ground, but what would happen on a battlefield one hardly ventures to conjecture. Worse still, the boys in the training school for 'non-coms.' seem to be in no better plight than their elders. Nearly all of them, after inspection, seemed to have one or more hopeless tusks, while a large proportion can only be rendered fit for service by strict submission to the dentist's orders, and many are beyond the reach of art. His majesty has resolved to spend at once 11,000 marks on stopping the teeth of his Christian warriors or in providing them with false sets. This applies only to the Prussian contingent. Several of the subject states have not made up their minds to incur the expense."

We take the above from a leading newspaper. It is encouraging to note that the demand for the appointment of dentists to

the army and navy is not only being urged by the dental journals and the profession, but is agitated in the public press, and is seriously entertained by even the crown heads of Europe. J. A. C.

Pulp Mummification?

I am glad that the subject of pulp mummification is being aired again. Having tried "Söderberg Method" in a few cases of inferior molars, clearing the pulp chambers and working the paste into the canals, I consider myself competent to say that however well it may work in some cases, it is a total failure in some others and too unreliable to be continued in practice.

There are other and better methods where mechanical approach to the apices of roots is impossible, well-known and well practiced by many dentists. Therefore why advocate a method that is doubtful at the best?

Every careful operator tries new methods of this character in a tentative manner and he should put to proof a very few cases that are selected with a view to close observation. In fact without proof of great excellence such methods in general practice should not be adopted. If all such trial cases are charted with more than ordinary care, and one out of four cases proves to be a failure after a period of a year, that one failure should settle the whole matter.

I contend that where it is impossible to burn out by chemical and electrolytic means such tissue as cannot be reached by mechanical means—and there are several excellent ways of accomplishing this—one can only trust to nature or the forceps. R.

Dentine Obtundent.

Dr. J. Hall Moore uses a saturated solution of cocaine and carbolic acid, in connection with hot air, as a dentine obtundent, with much satisfaction.

Practical Points—Stellwagen.

Some good practical points were given by Dr. Stellwagen before the New York Odontological Society. He said he disliked to go to New York and take exception to the indiscriminate manner in which the rubber dam is being used in this day. Often a tooth can be properly filled in less time than it would take to adjust the dam. He uses ordinary unsized muslin, torn or cut into squares. Properly managed these little absorbers will keep most of the cavities in the teeth perfectly dry. A number should be prepared and laid flat in a drawer for use.

As conveyors of medicaments to root canals and other purposes he uses Portuguese toothpicks. Trim them up to the proper size and keep them in the different vials of solution used for application to the pulp canals. They are convenient, effective and save time. By baking them dry they will remove moisture from the canals, a number may be used one after another, and it consumes almost no time at all. They will follow the curvature of the root and will not break off.

He uses wax in filling root canals. After putting the wax in the root, he makes a little tapering point of gold rolled up out of non-cohesive gold, and after warming, gently pushes this into the wax in the canal. The warmed point of gold will melt the wax and force it into every crevice and force it up, hermetically sealing the apical foramen. The wax is soothing, harmless and comforting.

H. H. J.

Triangular Pins for Crowns.

The writer has always advocated the idea that, in crowning roots, no more of the root should be removed than is necessary for the accommodation of the pin to be used. An idea which commends itself very highly on this line is found in the *Journal British As-*

sociation, by Dr. C. S. Reed, in which he advocates triangular pins and cuts the root-canal to correspond. We quote his words: "These pins are made by soldering together two wedge-shaped pieces of plate No. 8 gauge, or thereabout. One piece of metal must be made slightly wider than the other. The larger piece is placed flat on the soldering-block; the other is then placed on its edge along the mid-line of the broader piece, point being to point. It is soldered thus in the case of platinum, pure gold being used; with other metals, any ordinary gold solder. The result is a piece of T-metal, tapering to a point at one end. The root is prepared by reaming the canal in the usual way, and then enlarging in three directions, with a long fine fissure bur, to receive the angular pin. The canal then presents a T-shaped orifice, into which the T-shaped pin just fits. The crown is then fitted in the usual way by burnishing platinum foil over the root, or by any other of the many methods known to us. The advantages of this pin are: (1) Absence of rotation; (2) great strength, angular metal being considered the strongest possible; (3) disposition of the greatest strength just where most needed—that is, where the crown and root approximate; (4) ease and economy of construction, it being possible to make the pins of scraps of plate left in the usual course of work. Before cementing the crown in place, the pin may be barbed by cutting with a sharp knife, towards the point of the wedge, along the three edges of the pin." A.

Dr. Johnson's Position Sustained.

Editor American Dental Weekly:

I have just read in No. 31 of the AMERICAN DENTAL WEEKLY a paper, "Gold Crowns *vs.* Fillings," which I deem of great merit, especially when we consider the degeneracy and fraud (professional) so extensively indulged at present and for some years past.

The paper is to the point and timely. I

wish it could be read by every dentist in our country, specially those addicted to corrupt abuses, which is so terribly hurting the profession with the public. I hope other papers on the same line may follow until good results are accomplished, and professional *honesty* shall sit side by side of manipulative skill; then dentistry will be something to be proud of, and the public will have no cause for complaint.

I hope Dr. Johnson will keep writing; it is needed and he is equal to the task. We are not agreed exactly in relation to examining boards, but I can and will stand square up to him on the subject of gold crown abuses. Very truly yours,

B. F. ARRINGTON.

Goldsboro, N. C.

Are Contents of Tubuli Infectious?

We hear a great deal about the contents of the dentinal tubuli in pulpless teeth contributing, by infection, to the irritation of the peridental membrane, although the apical foramen shall have been successfully closed. From a point of reason, and in theory this would seem to be entirely tenable, but in fact and in practice is it not true that where the live nerve can be successfully and entirely removed, as in the upper cuspidati and in incisors, where the canal can be drilled to the apex with impunity, an immediate root-filling can be made with every assurance of success? Indeed, isn't it true that operators expect greater success with teeth treated in this way than when they have exhausted all the means of sterilization known to dentists, but with a doubt in mind as to there being a remnant of the nerve left in the root?

I would not discourage the use of disinfectants, not at all—they are always admissible and in purulent canals necessary; but wherever you find teeth whose roots have been filled, and which are given to

periodical soreness, you may look for the trouble at the end of the root, for there you will find it. I never did believe the tubuli would play any part in causing *lame* teeth if the root is entirely filled. A.

Gold Crowns.

I want to tell what I saw a short time ago, and what I thought about it.

A lady came into my office with bright gold crowns on three of her front teeth. Her teeth were naturally very long, and her lips short and thin, hence she showed her gold teeth to her own, and doubtless to her dentist's full satisfaction. She probably thought it made her look very grand, but I thought it made her look ridiculous, and that it was a pity there was not some way to get at and punish a man calling himself a dentist, who would thus mar the appearance of the human face divine. W. R. C.

Lumpkin, Ga.

Stupid Children.

What the school-teacher calls stupidity is often a condition of dullness resulting from disease. If such children are carefully examined it will be found that quite a large number of them are suffering from defects of eyesight, from deafness or from some obstructive disease of the nasal passages, of which adenoids is perhaps the most common, resulting in making them what is known as mouth-breathers. Moreover, certain children classed as stupid possess decided talents in certain directions which the school instruction is not well calculated to develop. —*Journal of Medicine and Science.*

"What's the matter with him, Doctor?" asked the worried father. The young physician took another look at the boy's tongue, felt his pulse again, noted his temperature, and proceeded to pour out some medicine. "I've forgotten the technical name for it," he replied, "but it ends in 'itis.' I'll fetch him out of it all right." —*Chicago Tribune.*

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., MAY 5, 1898.

NO. 34.

THE CARBONIZED COTTON METHOD.

BY DR. ELOF FÖRBERG.
Stockholm, Sweden.

After some hesitation I complied with a request made by Dr. F. A. Brosius the foreign editor of THE AMERICAN DENTAL WEEKLY to publish in that journal my method of filling root-canals, etc.

It is from America that we first learned dentistry and the Americans are recognized as the first dentists in the world up to the present time. It might, therefore, be deemed presumptuous to present new methods to them. Some of my methods, though, have been published before this in American dental journals, as for instance an article in the *International Dental Journal* in answer to Dr. Ottolegui, who, as secretary of the Dental Society of the State of New York, wanted to get information on the methods used by the leading dentists of Europe in porcelain fillings.

This time I have to report on a material which has been in use by me the last twelve years as a vehicle for medical applications for the treatment of exposed pulps, as tampon for wounds after extractions, and last, but not least, for filling root-canals.

The difficulties of finding an ideal root-canal filling is proven by the many different materials which have been recommended for that purpose. It is a variegated medley of the most heterogenous constituents, from gold "solid to the apex of the root," as the

term is, to the aqueous solutions and—the mere nothing!

A material suitable for the filling of root-canals ought to have the following properties:

1. Must be easy to handle, in order to be sure of a perfect filling.
2. Must be a non-irritant.
3. Must be perfectly aseptic and easily to be united with antiseptics.
4. Must absorb gases, which, in spite of all treatment, will develop in the canals.
5. Must be insoluble and not decompose.
6. Must form so solid a filling that filling of cavity can be done right upon it.

The materials commonly used and recommended for the purpose do not, in my opinion, fulfill all these requirements. Gold may certainly be made aseptic, but it is impossible to introduce it into curved and flattened canals.

Wood and gutta-percha are not aseptic and decompose. The cements are irritating and soon dissolve. They are not aseptic any longer than the antiseptics, which are added, remain there. Cotton is not always easy to be introduced. It is aseptic as long as the antiseptic holds forth, but afterwards decomposes and becomes an irritant.

After years of experimentations to modify cotton in a way to make it insoluble and non-decomposing, I finally obtained in the *carbonized cotton* the material which I was searching for. Carbonized cotton differs in many respects from the hitherto known modifications of carbon. It seems to be a modification between the diamond and the

graphite. Like the former, it is a non-conductor of electricity and heat; like the latter, it hardly burns. Like the charcoal, it is a good absorber of gaseous bodies, and excels it on account of its higher porosity. This porous, soft and flexible carbon, by itself a disinfectant, is also an excellent antiseptic, owing to the addition of anhydrous boracic acid, with which every fiber of it is impregnated.

The carbonized cotton was used by me first in the filling of root-canals. All difficulties arising on account of its brittleness and black color were reduced to a minimum after a short time, so that I can say it is excellent for various purposes. The property of carbon to absorb gases and liquids is of importance in the filling of root-canals. All septic masses which may appear in spite of careful treatment are readily taken up by it and made harmless. Carbonized cotton is entirely aseptic and can be brought to a red heat before use. It may be introduced in the canals as such, or combined with any good antiseptic. No irritation ever results within the tooth nor on the surrounding parts. People who use powdered carbon as tooth powder have carried little particles of it in the gums for a long time, not being harmed by it. I myself have filled the abscess sacs at the apex of teeth through the apical foramen with the cotton, giving no pain whatever, and in only one case it was gradually pushed out through the fistula without inconvenience to the patient.

Carbonized cotton does not decompose nor is it soluble; this is an important quality. It often happens that teeth whose root-canals have been filled with certain cements or pastes cause trouble again, because these materials were washed out after a time. It also can be easily handled. One objection is its black color. The same is disagreeable, but it does not cause any discoloration of the teeth; on the contrary, the latter retain their color well and if the fillings are not

extended beyond the gum-line, especially in the front teeth, nothing can be said against it. Discoloration of pulpless teeth is in my opinion caused only by defective treatment. The usual care has to be observed in the treatment of the canals before the act of filling. My method differs from others chiefly in that (1) I make it a point to wash out the canals thoroughly with a fine syringe, alternately pumping and sucking the liquid, and (2) that I use sulphuric ether.

Dr. Callahan proposed to make the finest canals accessible with a 25-30 per cent. solution of sulphuric acid, but I have used the ether for the last fifteen years which was recommended by Dr. Herbst as an obtundent for sensitive dentin. This is prepared in the following way: Some drops of concentrated sulphuric acid are put in a clean bottle, then the ether is added, stirring constantly with a glass rod until the acid is saturated. Any surplus of the ether is evaporated by the chip-blower. This chemical compound is very useful in the opening of narrow canals; it is a good obtundent and an excellent antiseptic. A fine pointed syringe brings it up in the canals, or long-beaked tweezers can be used. Dip the latter in the ether, push up as far as possible and open a little; the ether will adhere to the walls by capillary attraction. With a nerve broach the canals are then well cleaned, the treatment is repeated and the ether evaporated by hot air. There is no danger whatever in the use of the sulphuric ether, if too concentrated its action can be controlled by a solution of bicarbonate. I may state here that I even used it in cases of pyorrhea alveolaris until I found better results in the silver salts, itrol and actol.

In almost all cases the canals can be filled immediately after the application of the ether, only by blind abscesses a temporary filling (for instance Dr. Forssman's temporary cement) is advisable.

After the thorough preparation of

canals the carbonized cotton is introduced. To facilitate the work the cotton may be moistened with alcohol or 5 per cent. solution of carbolic acid; in cases of periodontitis or gangrenous pulps a 10-20 per cent. solution of formalin, with or without eugenol, is better.

My method of introduction is the following: A piece of the cotton is taken up with long-beaked tweezers and brought to a glow over an alcohol flame, then dipped in above named solutions and carried up in the canals with a root canal filler, with a zigzag side movement, which prevents the cotton from slipping. The instrument must be blunt and as large in size as the canal allows. Every piece is to be condensed, and larger instruments can be used farther from the apex. With a piece of spunk the whole mass is pressed in as soon as the canals are flush.

The carbonized cotton does not roll together or stop up the canals as readily as the common cotton often does. Should that happen, however, it can be remedied with a probe. In piercing the cotton with the latter, it is pulverized and carried up to the apex. It can be pressed in the narrowest fissures and canals, even in such where one's finest instruments do not go. Any surplus is taken off and the cavity well syringed or washed out with cotton saturated in alcohol. The filling is again condensed with cotton or bibulous paper and any moisture taken out with hot air. Perfect dryness makes the cotton much more valuable. The cavity is now to be excavated and any filling can be inserted directly on the cotton. It is of the greatest importance to close root-canal fillings as well as pulp cappings absolutely hermetically. Our cements are all porous and do not give any satisfaction. Gold and tin, or both together, are the best, but if it is necessary to insert cement or amalgam fillings it is wise to cover the bottom of the cavity with above named materials or with gutta-percha.

In front teeth, where the anterior walls are thin, I always line the latter with gold to give the tooth a natural appearance.

The carbonized cotton is the best filling material for root-canals of temporary teeth. It can be easily worked in the wide canals, does not irritate, and the saliva cannot change its quality.

As a non-conductor it can be used with advantage under metal fillings.

As a hemostatic it is excellent. While the common cotton decomposes and often causes secondary hemorrhage in attempting to remove it from the wound, the carbonized cotton does not irritate the tissue in the least. Of course it has to be handled more carefully to prevent it from pulverizing. But if wound around common cotton and saturated with an antiseptic it works very well.

It makes an ideal pulp-capper with some antiseptics dissolved in alcohol.

Together with a solution of 20 per cent. formalin and eugenol it is the best material after pulp amputations. Those particles of the pulp left after the amputation, the canals being inaccessible or the patient too nervous to remove everything, do not retain their vitality long. Above mixture devitalizes them quick and keeps them entirely aseptic. In such cases the rubber-dam has to be put on. If there is any pain it soon passes off. This preparation excels Dr. Miller's bi-chloride thymol paste, which also discolors the teeth.

Formalin, as well known, is a splendid article to harden anatomical preparations, preserving their natural color at the same time. This property makes it a splendid mummifying agent. The carbonized cotton being worked in the canals carries the formaldehyd in the canal iculi and stores it up there as a permanent antiseptic and coagulant.

In many cases of diseased teeth, especially in blind abscesses which had been treated by prominent dentists without success, I was able to bring forth an entire

cure in a short time with the carbonized cotton method.

Such cases prove more than all statistics. I believe, therefore, I can well recommend it as one of the most effective and surest weapons in our efforts to fight the different diseases of teeth.

Prominent dentists in Sweden, Norway, Denmark, Germany, Austria and France have pronounced the material and the method as very useful, and some even call it an "ideal" one.

A LOW FUSING ALLOY.

Below is a valuable laboratory contribution, taken from *Dental Register* and written by Dr. Grant Molyneaux. The subject cannot fail to interest those who would keep their laboratory equipment abreast with the times:

"Wood's metal has been used in dentistry for many years and is known to contain bismuth, cadmium, tin and lead. The alloy before you contains the same ingredients as Wood's metal, the proportions being changed so as to produce an alloy that may be cast into a modeling compound or wet plaster of paris impression and give a smooth, accurate model or die in metal. The advantage of being able to cast metal directly with wet plaster or modeling compound can be appreciated by all practitioners of experience, if the models or die be accurate.

"We feel safe in saying that a metal composed of five (5) parts of bismuth, three (3) parts of lead, two (2) parts of tin and two (2) parts of cadmium, properly compounded, will produce, when poured into either of the above named impression materials, a more perfect model than can be obtained by the use of plaster. But a model of this metal cannot be used in place of plaster in all cases, as in vulcanite, or celluloid work, for the fusing point of the metal is about 130° F.

"It is especially designed for the making

of a perfect die and counter-die with the expenditure of not over five minutes' time, and with the very simplest kind of apparatus. By the use of such an alloy the difficulties of sand-molding are overcome and the production of a perfectly adapted plate is the result. To successfully use this, or any low-fusing alloy, several points must be constantly observed: 1st. Castings are sharpest and nearest perfect when the metal is poured close to the congealing point. 2d. Overheating causes a loss of time and deterioration of the alloy. 3d. To make a perfect and smooth casting in modeling compound the impression should be first oiled and then the alloy is cast in a mush-like consistency, when it will fall in a thick, soft mass into the impression, which is quickly jarred on the table, cooled in water and separated. A little practice will enable the operator to produce a perfect model in every instance. 4th. Take a plaster impression directly from the mouth, soak it thoroughly with sperm oil, and pour the alloy at a little higher temperature than for modeling compound and let stand until cold. 5th. In order to obtain a thick base for the model take a thin copper strip, in lieu of this take a strip of heavy writing paper, about ten or twelve inches long and two inches wide, wrap around the impression and hold in place by snapping over it a small rubber band. Fill in spaces between band and impression with soft putty, which will always be ready for use by being kept under water. A half-pound screw-top vaseline jar half filled with soft putty and covered with water will keep pretty soft for years. 6th. To make counter-die, wrap the copper strip around the base of the die and fill all undercuts and unnecessary parts with the putty, paint over the surface with whiting dissolved in water or alcohol, and cast the alloy as cold as possible.

"Before remelting castings they should be cleaned of all putty and other dirt; if, however, the metal becomes contaminated, it can be heated until it becomes perfectly fluid, when the impurities can be removed

with a piece of blotting paper. One illustration of the use of this alloy may be suggestive of its many valuable applications: In adapting a gold or platinum base for full dentures where the recession over the tuberosities and anterior ridge is so great as to make sand-molding without a core absolutely impossible. Make the model or die of fusible alloy by casting into the impression. For such a case always use plaster, as this can be broken off in such a manner as to be restored and a second die cast. Upon this second the relief or vacuum chamber, made of block tin, can be attached, with thick shellac varnish, or the relief can be first trimmed out of the impression. Use the second die for the first stamping of the plate, making the adaptation to the undercut as close as possible with riveting hammer. Try the plate in the mouth and properly trim and wire if necessary. Replace on the used die and wrap the plate and die with one covering of cheese-cloth or thin paper, and place in the Parker shot swedging device and swedge. The plate cannot now be removed from the die, but by placing the same in hot water the metal will run out of the plate, leaving it unchanged in shape. It can now be polished, and after transferring the relief from the old die to the unused one, the plate is sprung onto it, and swaging with shot and melting the metal out as before, will leave the plate with an adaptation that cannot be procured by any other method.

"In taking an impression for metal castings, it should be a little thicker than usual, and any number of dies can be made from the same impression, all of which will be alike.

"The compounding of this alloy requires the greatest of care in protecting it from the action of the air during the first melting and in the manner of adding the metals, as it never again approaches the first heat. Except by carelessness, the metal will remain permanent in composition and working qualities indefinitely.

"The necessary expense of this alloy, which at first may seem unreasonable, will be saved in the saving of time in one difficult case. After two years of constant use of this metal I can positively state that it will meet all the claims of this clinic."

CANADIAN CORRESPONDENCE.

Editor American Dental Weekly:

The air is so full of war rumors that I can think of little else. Here in Canada Anglo-Saxon blood courses more quickly through our veins at the thought of stirring times ahead. One could more readily talk politics than dentistry at such a crisis, but that is not my task. I must apologize for longer delay than was intended, which apology I hope you will accept in good faith without the explanation, that would be uninteresting to your readers.

The event of the past month in Canadian dentistry was undoubtedly the annual meet of the Ontario Dental Society at Toronto. The management of the Ontario Dental Society have always tried to provide the very best and latest for the program, and it has been the custom for some years, in addition to our local talent, to invite some specialist from the United States—some one whose preeminent ability in a certain direction, entitles him to the confidence and respect of the reading and thinking dentist. This year it was our good fortune to secure Dr. G. V. Black, of Chicago, to talk to us about "Amalgam," and by means of his instruments demonstrated to us what an utterly depraved material it is as ordinarily manipulated.

It will be unnecessary to further encroach on your space by telling about Dr. Black's address and clinics, as it is probably a familiar subject to your readers. The members of the Toronto Dental Society met Dr. Black two days before his address to the Ontario Society and put into his steel tubes about

forty fillings of the alloys used by them. The report of results will appear in the May number of the *Dominion Dental Journal*. The Ontario Society was especially fortunate in the fact that Dr. C. N. Johnson and Dr. Fred B. Noyes, both of the Windy City, accompanied Dr. Black and took part in our proceedings. Dr. Johnson is always a welcome visitor to our annual meetings and generally times his visits to his native province so as take in the Ontario Dental Society meeting.

Dr. Fred. B. Noyes proved himself an indefatigable assistant to Dr. Black and made himself a host of friends during his visit to Toronto.

The officers elected at the business session of the Ontario Society were: President, Dr. G. S. Martin, Toronto Junction; Vice-President, Dr. J. M. Brumacombe, Bowmanville; Treasurer, Dr. Carl E. Klotz, St. Catharines; Secretary, Dr. W. Cecil Trotter, B.A., Toronto.

Since my last letter to you two prominent members of the profession in the city of Toronto have died, Dr. Charles P. Lennox and Dr. Fenton. Dr. Lennox was for many years prior to his death the efficient and trusted Treasurer of the Ontario Dental Society, and will be missed in both the provincial and city societies as one ever willing to do his share at no matter what sacrifice. Dr. Fenton lost his life on the afternoon of Good Friday as the result of a runaway while driving with a nervous horse. A partnership had existed between Drs. Patterson and Fenton for over forty years—unprecedented so far as I have heard in the annals of the profession. Dr. Patterson, the senior member of the firm, is Dr. C. N. Johnson's father-in-law, and under their preceptorship Dr. Johnson spent his student life before obtaining his L.D.S. degree.

The Montreal dentists speak highly of their treatment by the Vermont State Dental Society during their recent visit to Rutland, and are only sorry so few of their members availed themselves of the opportunity.

I forgot to say in passing that, simultaneously with the meeting of the Ontario Dental Society, an anniversary session was held to commemorate the thirtieth anniversary of the incorporation of the dental profession in Ontario. Many interesting papers were read, and many interesting letters were received from the "old timers," who laid the foundations of our profession so wisely so many years ago.

Dr. H. T. Wood, of Toronto, who has a continuous record as a member of the Board of Directors since the incorporation, March 4th, 1868, read a deeply interesting paper, "Dentistry in Ontario Previous to 1868." Dr. Marshall, of Belleville, read a paper, "Thirty Years Progress in Dentistry in Ontario 1868-98."

Dr. R. J. Husband, of Hamilton, concluded this unusually interesting symposium by a paper, "Our Responsibility for the Future of Dentistry in Ontario."

Dr. McInnes, of Brandon, President of the Manitoba Dental Society, was a visitor at the Ontario Dental Society.

CANUCK.

Toronto, April 27, 1898.

Formaldehyde for Burns.

Another use for this germicide is noted in *Modern Medical Science*:

"Some of the medical journals of Paris are just now recommending formaldehyde in the treatment of burns, compresses soaked in a ten-per-cent. solution being applied to the affected part. It is said that in twenty minutes all the pain ceases, and that continued renewal of the application causes all traces of the burn to disappear, so that not the slightest redness of the skin is left. This goes with the ptomain-toxic element in burns, lately observed."

When caries extend to the bifurcation of roots, make a mat of two or three layers of tin, place it in the bifurcation and use it as a base in filling the rest of the cavity with amalgam.

"UNCLE GEORGE."

CHICAGO, April 28th, 1898.

A lovefeast and congratulatory dinner was given in honor of Dr. George Cushing, at the Leland Hotel, Chicago, last evening, under the auspices of the Odontological Society, of which he was the first president. Covers were spread for about sixty of our leading men.

The object of the dinner was to bid farewell to "Uncle George," who concluded yesterday his active career, to remove to California in order to regain his health, and to spend the remainder of his days in the land of sunshine and flowers.

Greater honor and homage was never paid to any of the pillars of our profession than that which "Uncle George" received last evening. After partaking of a modest banquet, about twenty-five of those present in their turn eulogized our dear old friend in a most beautiful manner. More sincere toasts expressive of deeper gratitude to any one man I have never had the pleasure of listening to. His sturdy and faithful qualities were beautifully set forth, and must indeed have made these hours (as Uncle George put it himself) "the saddest and most happy moments of his life."

The toastmaster (the president of the Odontological Society), Dr. James C. Reid, during the course of the evening called on about twenty-five men who expressed their admiration and their good will toward "Uncle George." All of them responded most willingly, and it was evident to all that their responses came directly from their hearts. Some of the toasts were given by the following: L. P. Haskell, Wm. A. Stevens (fraternity), A. E. Brown (early practice in Chicago), C. N. Johnson (teacher and pupil), G. V. Black (Illinois State Dental Society), A. W. Harlan (First State Board), T. W. Brophy, Dr. James Lesley, of Cincinnati; Edmond Noyes, J. W.

Krauss, A. O. Hunt, followed by about nine or ten of the younger men.

Venerable Dr. James Lesley, of Cincinnati, delivered an oration so full of beautiful sentiment and sincerity, that its impressions on the hearts and minds of those present will never be forgotten.

Dr. J. Lesley has been a dentist for sixty years, although retired from active practice thirty years ago. He was the discoverer of the cohesive properties of gold.

Dear "Uncle George" was so overcome by the beautiful expressions of praise and thanks that it was with great difficulty he responded in his good old hearty way. God bless him, and let him spend the remainder of his years in health and happiness, and keep him for us all, is the wish of every practitioner throughout the United States.

Chicago Correspondent.

H. H. S.

Odontalgia After Pulp Extirpation.

It is rather an unusual thing to have a tooth remain sensitive to thermal changes after the pulp has been removed, but occasionally such cases present themselves, which may even increase in intensity from continued irritation until odontalgia supervenes. Such a case was cited by Dr. L. S. Goble, in the *Dental Cosmos*. The pulp had been devitalized and one or two of the nerve canals filled. The pulp chamber was filled with amalgam. A small nerve fibril remaining in the anterior root had kept up a continual state of responsiveness to thermal changes. Relief was obtained by destroying the remaining fibrils.

The citation of this case brings to mind several such cases which have been observed from time to time in past years. One case especially was very perplexing, and the trouble hard to locate. First upper molar with an exposed nerve, which it was deemed advisable to devitalize, was treated and filled. The process of devitalization was accom-

plished with arsenical paste, the nerves extracted and the roots filled in the usual way. Some weeks after the tooth had been filled, the patient returned complaining of pain and sensitiveness in the tooth. Supposing it to be a case of pericementitis, which would probably pass away from local applications, the gum was accordingly painted with a preparation of iodine. Patient again returned with no relief and complained that even warm tea was unbearable. Knowing this tooth to be devitalized the first thought was that it must be some other tooth which had set up a reflex pain. Careful examination did not reveal any trouble in the other teeth, and repeated tests proved conclusively that it was either this filled tooth which was causing the trouble or the patient was affected with an abnormal imagination. The filling was removed and the roots opened, which revealed the fact that there was remaining in the posterior buccal root the smallest bit of a nerve fibril. This was at once removed, the tooth refilled and remained comfortable ever after. It seems yet a mystery how such a small bit of nerve substance could have caused such acute pain from thermal changes, being protected, too, by the overlying tissues of alveolar process and gum.

If practitioners would only take the trouble, many cases of interest might be cited as incidents of office practice.

H. H. JOHNSON.

Upper Impressions.

You are directed to scrape the model where the roof of the mouth is soft, to insure a good adaptation of the plate; but even this will not suffice where it is desirable to carry the plate back to the full extent of the hard palate, for the reason that the tissue is soft, as a rule, across the entire vault, any scraping will be guess-work. The impression taken in plaster will mark this soft tissue very nearly in its normal position—a condition undesirable, because a plate ought to fit up very snugly just at this point. Now

for the point under consideration. A piece of softened wax about half an inch thick, placed across the posterior part of the impression tray and pressed to place in the mouth, will push the soft tissue up to where there will be a solid roof for the plate to rest against. Now, with this wax left in the cup, sufficient plaster is added and the impression taken in the usual way. The atmospheric pressure thus obtained is something remarkable, as evidenced by the resistance met in removing the impression and in the fit of the plate.

A.

Was It Foreordained?

Was it foreordained that I should be a dentist? When I was a small boy, a servant found in the public road near our home in Mississippi a buckskin bag containing a handful of artificial tooth-crowns of the wood-pivot variety. These were laid away for the owner, who might chance to come that way again, but did not, and when I became a dentist they were handed to me as part of my inheritance; and many a one of them have I used since my initiation into dental ranks. While they have been superseded by the modern crown, yet I find them handy for temporary purposes quite often.

Those were the days of the itinerant dentist, who made his thousands traveling from one plantation to another and faring sumptuously every day. Often would he lay aside his excavators and mount the horse for a fox chase or a deer hunt.

The planters were glad to entertain him for days, if he were an agreeable, educated man, for the social pleasure as well as to have his professional skill. Reverie carries me back to the days of Auld Lang Syne, when, with my red saddle and my pony, and my dog and my gun and my fishing tackle I was the happy country boy. But I awake to the fact that the strife of war has laid waste. A new régime is upon us, and again war is heard.

B. H. CATCHING.

THE
American Dental Weekly
 ISSUED EVERY THURSDAY.

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34 WHITEHALL ST., - - - ATLANTA, GA.

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Subscription \$2.00 per year; \$1.00 for six months—including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited. The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, May 5, 1898.

Associate Work.

It has been said by Dr. Taft that "So great is the importance of association work regarded, no one of any reasonable professional ambition can afford to stand aloof from or refuse to participate in it."

And yet there are thousands of good men in the profession who do stand aloof. Men, too, who would be a power in associate work. And yet it seems almost impossible to get them to join the four thousand who are banded together for mutual improvement and for the advancement of the profession. Every advance made in the profession rounds to the benefit of the non-associates indirectly. It must be that hundreds and hundreds of them, if they were deprived of the indirect results of associate work, would be brought face to face with the necessity for it. They are honorable practitioners, perfectly ethical, and seem to love their profession, but at the same time are manifesting an indifference which they do not seem to

realize is a hindrance to their personal welfare, to say nothing of the profession to which they owe so much.

To enlist the interest of these men has been a question of live importance since associate work began. State associations move annually from place to place in a kind of missionary spirit, and do arouse some to become fellow workers. But the majority are still out of the fold. Will it always be so? Can't there be some way devised by which these good men can be brought in? Can't it be shown to them that it is to their interest to become active members of their State association? Personal solicitation will accomplish much. We can now point to one of the most active men in a State association who stood aloof for years thinking those banded together in associate work cared not to have him. An urgent invitation induced him to attend one meeting, and he has attended every one since. He saw that it was good for him to be there, and that he was welcomed as an associate member, and that what he had to say was listened to and appreciated.

Would it not be well to select the very best man for president, and keep him in office for a term of years? He would then feel a greater responsibility resting upon him, and would exert himself to extend the usefulness of the association. He would better learn the individuals of his association, and could apportion the work so as to enlist the interest of each member. He would feel that for not only one meeting was he responsible, but would actually have the whole work upon his shoulders.

This plan would not please those who simply attend from year to year hoping to be made president, and, as is so often the case, after they have been elected president they retire forever from the association. A large number of ex-presidents of the Georgia Society seem to have forgotten that such a society is in existence, as they never attend its meetings. They have had all they wanted

and are satisfied. Such men are a greater drawback to associate progress than ten times the number of those who were never members of the association.

Elect a president and have it understood that if he makes a faithful officer, shows special fitness for the work, increases the interest in it, he will be re-elected so long as he performs his duties faithfully.

Wars and Rumors of War.

It is now no longer newspaper stories manufactured to order and specially guaranteed to produce the requisite excitement, but it is actual hostilities. We are at war with Spain. The fact will be more apparent that war actually exists, when it is known that it is proposed to treat the members and visitors of the Georgia Dental Society to a free naval engagement off the shores of St. Simon's in June. And according to Dr. Atkinson, who has made an investigation, the world renowned Jack Clancy proposes to serve, as a special delicacy, Spanish flotillas, torpedoes and gunboats according to order, provided the supply is not exhausted by that time.

Yes, war is on and warm blood seems to be getting warmer and things are at a boiling point everywhere. Governments disagree, fall out and fight; congressmen and senators forget their dignity and engage in petty scraps; private citizens fight and scratch and kill each other, and the flames have spread to the dental profession.

Failing to get recognition in time to enlist the fighters in the ranks of the army and navy, they must war among themselves. The examiners and faculties have had their little spat, but have cooled down for awhile. Before hostilities ceased, however, many red-hot editorials and speeches were recorded as a part of the history of our profession.

Hot editorials are still the order of the day, and one New York correspondent of a Western journal has so much war spirits

aboard that, having no one to fight himself, he is elated over the fact that things are waxing warm, as it makes spicy reading.

Things are at such a state that a man does not feel safe in taking the lead in any enterprise or reform for the good of the profession for fear of being accused of having some improper motives behind it all. Personal jealousies and pecuniary interests sometimes present two sides of a question coming to view at the same time.

The dental manufacturers, unable to keep cool amid the excitement, have also picked up differences, and two prominent houses are at war. The West has invaded the territory of the East without permission or invitation and has been reaping in the rich spoils. The East says hold, friend, show up as to how you got rightful possession of that. The courts will decide, and justly, we hope.

H. H. JOHNSON.

Belated but Appreciated.

A weekly dental journal was established on September 9, 1897, at Atlanta, Ga., by Dr. B. H. Catching.

The projecting of an enterprise of this sort certainly indicates vim and pluck on the part of the editor and owners, and especially so since other efforts of the same sort have been inaugurated in the past which did not receive a sustaining support, and were forced out of the field.

We have always given Dr. Catching credit for energy and perseverance considerably above the lot of ordinary men, but we must confess that when this effort was proposed and the work put in operation that there was a little bit of misgiving as to success; however, as the journal appears from week to week, this misgiving has been fading away till now it is about all gone, and we entertain strong confidence that this will be one of the permanent, efficient and valued journals of the profession.

There are quite a number of weekly medical journals, and some of them of quite large proportions; some of these have been well sustained for many years.

There is no question but that there is room in the profession for a weekly dental

journal, and Dr. Catching seems to be just the man for this work. The numbers thus far have been filled with interesting and valuable material, that which will be of real service to the busy practitioner. We most heartily commend this journal to the profession.—*Dental Register*.

The above from the stable pen of Dr. Taft cannot fail of appreciation by those who have labored earnestly to give to the profession a weekly journal worthy of confidence.

Dr. Taft is one of the colossal figures of dentistry and is not unmindful of those agencies which are instrumental in maintaining a high professional standard and in disseminating knowledge. He has observed, as have others, that THE AMERICAN DENTAL WEEKLY has sustained a character from the beginning that entitles it to journalistic recognition and the patronage of the profession, and has been pleased to give it the above commendatory notice, which cannot be misunderstood.

THE WEEKLY came to a field that was not occupied.

It has furnished its readers with matter that is fresh and of interest, not long and irksome, consequently every line is read.

It has upheld the highest conception of professional integrity.

It has seen the monthly journals acknowledge its success.

It will continue without bombast to go to the profession the same bright, newsy and select journal, in the future as in the past, making friends wherever it goes.

ATKINSON.

The dental profession of America is indebted to Dr. Ottolengui for the public-spirited manner in which he has worked to rid the profession of the future possibility of patent annoyances. The Southern Branch of the National unanimously indorsed his movement.

H. H. J.

The Board of Dental Examiners of Florida will meet in Jacksonville May 10.

Fillings of Gold and Tin.

A great many operators use tin and gold both in the same cavity, and justly claim much in support of this practice from the standpoint of saving the teeth as well as the physical strain upon both operator and patient that is inflicted when gold only is used. There is no doubt much can be said in advocacy of this method by those who practice it, and when practical results are the evidence of success it will take a pretty good man to refute their argument. We quote from Dr. C. J. Lyons, in *Dental Register*, his method of preparing this material for use, and if he succeeds in inducing one practitioner to fill posterior teeth after his manner he will have done the world good:

"The material of gold and tin, known as tin gold, is prepared by laying a sheet of No. 4, 5 or 6 non-cohesive gold foil upon a sheet of No. 4 extra-tough tin foil, cutting them into 2x4 strips and rolling them together into a soft rope; they may then be cut into short pieces, or they may be used whole in a manner similar to soft gold ribbons. The material is inserted on exactly the same principle as fillings of non-cohesive gold. The instruments are the same as used for non-cohesive gold, except that the chief requisite being that they have square and not round points, as a large part of the packing is done with the side of the instrument.

"In combinations this way it makes no difference if a slight amount of moisture gets on the receiving surface during filling, as it does not interfere with the progress or success of the operation, for the material becomes consolidated subsequent to its insertion, owing to an electro-chemical process through which the tin is dissolved and re-deposited upon the surface of the gold, and by this means the material becomes rigid and all parts of the filling thoroughly bound together; at the same time a slight expansion of the material takes place, leading to

a more complete closure of the cavity. In tin-gold the wedge principle is used for holding in the filling. One-fourth sheet of tin and three-fourths of a sheet of gold make the best combination, but larger proportions of tin may be used successfully. For large cavities one-half, two-thirds, or even whole sheets, can be rolled and used when cut into cubes or blocks.

"To obtain good results with this combination, it must be used with the same care and accuracy that are required for working gold."

To Avoid the Patient's Breath.

Dr. Merriman, in *Pacific Gazette*, says:

We are subject to the exhalations of our patients, who are not aware that the breath exhaled from the nostrils is unpleasant to the olfactory nerves of the practitioner, who has as much right to be exempt from it as that the patient shall expect us to use aseptic precautions. When you find that the breath exhaled from the nostril is tarnishing your mirror or affecting your olfactory nerves, say to your patient, "Excuse me, I wish to place a piece of paper to prevent the breath from moistening the gold." Then cut a piece of paper that will slip under the folds of the rubber-dam that covers the upper lip, and bend it in front of the nostrils to form a funnel so that the breath exhaled by the patient will be conducted upward and away from the operator and the operation.

To Make Gutta-Percha Points.

To make your own gutta-percha points is proper practice. Any good "permanent" preparation like Jacob's or Caulk's is better than base plate, being stiffer. Take a polished glass mixing slab and warm it, then take another small piece of clear glass—photographic plates are just the thing—and warm that; then roll your warmed gutta-percha, carrying the point to the edge of

the slab and graduate it to suit the case in hand. Aristol powder, iodoform or crystals of hydronaphthal, or what you please, in dry form, may be nicely incorporated in the rolling by sprinkling it on the slab. The merit of this way of making is that one can see just what is being done.

Springfield, Mass.

R.

In history making times like these a truthful record of passing events becomes an imperative need. The daily newspaper is ephemeral and not easily preserved for reference. The *American Monthly Review of Reviews* has all the value of the newspaper, besides distinctive merits of its own. As an epitome of current history it is complete, compact, terse, impartial, absolutely reliable, and judiciously edited. As a piece of journalistic history-writing what could be more brilliant or fascinating than the May number of this publication, with its story of the Spanish-American war-crisis? Merely as a souvenir of this past eventful month the *Review* has a certain unique fitness.

At the annual meeting of the New Jersey State Dental Society to be held in the "Auditorium," Asbury Park, N. J., July 21 and 23 inclusive, the exhibit committee are making efforts to eclipse all past records.

Dr. Harvey Iredell, of New Brunswick, N. J., has been chosen chairman of the electrical portion of the exhibit. He will have placed at the disposal of the exhibitors both a 500 and 110 volt current. Those having water motors to present can be accommodated with high water pressure also.

The exhibitors selecting space prior to the programme going to print will be mentioned therein.

The injection of a syringeful of lemon juice into the nose, after it has been cleaned of clots, will, says the *Medical Summary*, stop bleeding after everything else has failed.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., MAY 12, 1898.

NO. 35.

CHICAGO CORRESPONDENCE.

CHICAGO, April 28, 1898.

Editor of the American Dental Weekly:

Have you ever been mad clear through to your very toes, so that every time you stepped you could feel the anger jolt? Have you boiled and sizzled and swore about something that had happened which you fancied was not right? Have you brooded over a seeming injustice done you by your fellow-man till all the sweetness and light had gone out of life and nothing remained but cinders and sourness? And then after all this splutter have you sat down quietly to think it over and wound up by concluding that there was not really so very much to be mad about, and that you had made a pretty precious fool of yourself to no account?

Well, I guess we are all human—some of us more so than others—and I suppose we must live a long time to learn how to take the little pin pricks of experience and look at them philosophically. Some of us never seem to learn, no matter how long we live, but we should all try to learn. Most of the so-called affronts of life really do not amount to anything after all, and the only injury they do is to belittle the one who offers them.

These reflections are forced upon me as the result of an occurrence that was brought to my notice the other day. I really came very nearly getting mad. It seems that some fakir with a fake was traveling through Canada, trying to sell to the dentists—for a

mere pittance of \$25—a wonderful system of painless dentistry, on the recommendation that I was using it and strongly endorsing it. Now if there is anything under the blue vault of heaven that I have not endorsed it is these so-called painless methods that have been flaunted before the populace in the past few years. I have even run the gauntlet of being called old foggyish because I pinned my faith more to delicate and expert manipulation with sharp instruments, coupled with kindness, than I did to all the modern and mongrel nostrums on the glutted market. And then this is not the first time I have been the butt of the fakir. A chap did the same thing with me in one of our Western States several years since, and only within the last few months word came to me from the South that I had been quoted as using and recommending a certain kind of filling material that I never have used except in a test, that I never shall use in any other way, and that I should not recommend under any circumstances.

Why it is that I have been singled out by these gentry for their especial prey I am unable to conceive, unless it is because I have the reputation of being a peaceful man. Now peace is all right, but not peace at the price of recommending patent and secret nostrums, and while I am not a fighting man, yet, in the language of the Tennessee judge, "By the eternal"—but hold on, if I am not cautious I shall be getting mad, and that would hardly be consistent with the sermon I preached a moment ago. So I had better take up a collection and sing

the doxology on this theme. I need something to dismiss the present congregation of reflections from my mind.

So I turn to something pleasanter. In a former letter I told you of the anticipated departure of Dr. Geo. H. Cushing from Chicago to take up his residence in California. He expects to leave tomorrow—April 29th—and if ever man carried with him the good wishes of his fellows Dr. Cushing is that man. Last evening about one hundred of the representative members of the profession in Chicago assembled to do him honor, in the form of a complimentary dinner. Mr. Editor, I wish you might have been present. It would have made you think more of humanity in general and your profession in particular. What an outpouring of good-fellowship that was! What an incentive to young men—so to live that they might reap a tithe of the tribute that was paid that glorious old man! Old man—I beg pardon—he was the youngest spirit in the party. Ill health may attack him, the relentless years may come and go, leaving their blight upon his physical being, but not all the powers of circumstance and change, not all the petty cares that bombard us from the cradle to the grave, not all the discouragements that float on the flotsam and jetsam of this surging life of ours, can ever dim the radiance that shines from his serene and noble soul. To say everything that was said of him last night would fill a volume, and it would all be rare reading. Nearly thirty speeches were made, each bearing a message of love and esteem well worth a lifetime of endeavor to win. It was an occasion never to be forgotten by those assembled, an event such as those which make men better and braver and happier. “Uncle George” deserved all he got, and for once in a way a man learned the true estimate of his fellows without having to die to do it.

C. N. JOHNSON.

MECHANICAL TRAINING FOR SURGEONS.

We have always considered a mechanical mind essential to surgery. Often have we watched the awkward handling of instruments by physicians who presumed to perform surgical operations. Surgery is strictly mechanical, and not many physicians are surgeons, but all of them attempt operations. It is very common for dentists to see fractured jaws set in the most unskillful manner by physicians. And yet many physicians hoot at the idea of turning such cases over to dentists. Some of the most skillful surgeons of the world were dental practitioners and thoroughly learned the deft manipulation of instruments. But see what Dr. Chas. F. Smith, of Providence, R. I., says on the subject in the *Atlantic Medical Weekly*:

“Mechanical skill, ingenuity and the ability to use hand and brain together are factors which have had more to do with the progress of civilization in all its branches than any other contributions of the human intellect. But that credit has not been given to the mechanic which rightfully belongs to him. Mechanical ingenuity is worth far more than it is usually rated. It is a peculiarity of mind which evinces considerable intelligence, and when possessed by one otherwise endowed with refinement and culture, becomes well-nigh invaluable.

“Professional men of all kinds, and men of letters, have been inclined to look down upon the principles of mechanics and to regard the best demonstration of them as something below their ordinary standard of excellence.

“But that the educators of to-day are beginning to realize the necessity of training the hand to serve the brain, the manual training high school arises, and it looks now as though we had entered upon an era when we shall be obliged to even up the inequalities hitherto existing in our system of edu-

Education, sacrifice, if need be, some of our classical attainments, and turn our attention toward the more practical sides of life, making ourselves at the same time more useful members of society.

"Knowledge without practical application is useless. We find too often among professional men those possessing great knowledge, and yet unable to construct or do the simplest thing with their hands, unable even to drive a nail straight.

"The medical profession, above all others, needs a liberal amount of mechanical training in its curriculum, for a surgeon's skill depends wholly upon his ability to use his hands, and I believe the time will come when a suitable amount of this branch of knowledge will be required before a student shall be allowed to begin his medical course.

"I do not wish it to be understood that every man who attempts the practice of medicine should be an inventor, but he should possess a fair amount of mechanical ability. Without such ability he cannot conscientiously attend to fractures, or attempt to do difficult obstetrical work.

"I have seen some very bad results in fractures put up by men who possess little or no mechanical ability, and yet aspire to surgical honors. My advice to these men is that, even though fate does place them on the surgical staff of some good hospital, they had better turn their attention to medicine, where the field is fully as large and the honors awaiting them even greater. I, myself, would rather be a Loomis or a Delafield than a Bull or a McBurney.

"A knowledge of anatomy, a careful attention to antiseptics and a mechanical turn of mind are qualities which are capable of making a good surgeon, but rob him of his mechanical turn of mind and you have robbed him of his greatest strength.

"An obstetrician of a mechanical turn of mind does not have so many extremely difficult primiparae to report as does his neighbor whose fingers are like so many

sticks, and frequently he will help the child into the world naturally and easily, while his neighbor sees no other way out of the difficulty than to apply the forceps and draw the child by force, at the same time rupturing the perineum more than necessary in his hurry and excitement. * * *

"It does not follow that the mechanical genius is a much better man. He may be less wise than his neighbor in many respects, but, other things being equal, he is always a better surgeon and a better obstetrician, and as it seems to be the consensus of opinion among our brothers and the laity that to the surgeon redounds the highest honor (with which opinion let me say I do not coincide), it behooves us to look well to our mechanical education. It adds the keystone to the arch, and creates a man whom I have always admired in the medical profession, a physician and surgeon.

"Many illustrations could be presented showing the value of mechanical ability in medicine, but I will burden you with only one.

"When an old lady of seventy-five years sustains a fracture of the thigh bone we are justified, if we follow the advice of some, in placing sand-bags beside her leg, and leaving her to die or get well. The argument is that she must not be burdened with an apparatus lest she decline and die from the confinement. But the surgeon who is a mechanical genius can see no common sense in such an argument. He must devise some apparatus by which she may be liberated to some extent, and by which the bones may be allowed to unite, which they will do, in many instances, if given the opportunity.

"He does not recognize any liberating qualities in the sand-bag, notwithstanding it is recommended by his teachers and wiser members of the profession. He calls upon his stock of ingenuity or that of some one else, and the patients get the benefit, and perhaps the difference between a solid bone

and a flail joint, or even the difference between life and death.

"It may be presumptuous in me to cry down the time-honored sand-bag, but I cry it down nevertheless, and if it were not for occupying too much of your time I would give you a practical illustration of the harm which it is capable of doing. It has nothing to recommend it, and it is extremely unscientific. It is one of the many things which stand in evidence of the want of mechanical skill and ingenuity in the medical profession.

"The course in almost every medical college is growing better and better every year, but strange to say, nothing has yet been done to furnish the student, either before or after he has entered college, with the means of obtaining a sufficient amount of skill in the mechanical part of his medical education."

A New Idea?

To lessen the weight and to economize in bridge-work are two most desirable considerations.

We believe Dr. Thomas Crenshaw, of Atlanta, has solved both problems. In all suspended gold crowns, *after* reinforcing same, select a porcelain tooth corresponding in size to the class desired. Wrap this with thin sheet platinum, first having coated the platinum *inside* and *out* with the proper flux. Place small bits of 22-k. solder in bottom of gold crown, then place the platinum wrapped tooth in the crown with solder liberally arranged between tooth and crown. Invest and direct the flame at the *bottom* of the investment. This attracts the solder to the cotting edge or crown surface, insuring perfect contact at all points. We have had the pleasure of seeing this practically demonstrated and are impressed with its two great desideratums—economy in gold and a minimum of weight, without impairing in the least the strength of the bridge.

J. A. C.

SAMPLE COPY DENTIST.

Regular Cash Subscriber and Sample Copy Dentist meet in the dental depot.

Cash Subscriber.—Doctor, have you read the latest magazines on the new methods of practice? I have profited very much by them, and am here to order some of the appliances, remedies, etc.

Sample Copy.—No, I have not read any of them lately, I've been so busy. I am here to select some rubber teeth, and examine some forceps, and to inquire if there is a late local anesthetic on the market.

Cash Subscriber.—Well, doctor, you should take time to read the journals. You will find many valuable things in them, and they will enable you to keep abreast with your profession. I take regularly several dental journals, and find that I can't afford to be without them.

Sample Copy.—Oh, I get lots of journals and do glance over the advertising pages occasionally, but those writers are most too hiferlutin. I'll bet they can't make a rubber plate. I haven't much patience with them. Why, I heard where one fellow said he could actually force medicine into a tooth by electricity. Did you ever hear of such bosh? It makes me tired. Another fellow I've heard said of, claims that he can cure this disease, I don't know now what you call it, but it causes the teeth to fall out. Why, any darned fool ought to know that a good thick, strong rubber plate, with some of these glossy teeth, would be much better.

Cash Subscriber.—Yes, doctor, the advanced men in the profession are doing just what you are talking about. May be if you would read closely you would see how these things are done, and then you could do them. What journals are you taking?

Sample Copy.—Oh, I just get lots of them. I find some of them quite convenient for waste paper in and about the laboratory. I can't say exactly how many I do get, but quite a number. I would like, however, for you to tell me something about that

ceramic dental work. I don't know what in the world a fellow means by such talk. An amalgam peddler was in my office the other day, and he was trying to show off smart, and told me about some fellows doing it. I guess I must take some time and read *my* journals. I expect I might learn something from these hiferlutin' fellows, after all, though I'll bet they can't make a rubber plate.

Cash Subscriber.—I will be pleased to tell you what I can, if you will call at my office at 5 o'clock this afternoon, when I will be engaged in making an orthodontia appliance.

Sample Copy.—(To himself.) Now listen at my friend. He's got to be hiferlutin', too. What was that thing he said he was making? I believe that I will go around, just as soon as I get this set vulcanized; I can do that in forty-five minutes. May be I can tell him how to vulcanize quickly.

They part.

Cash Subscriber.—Come in, I am ready to explain any thing that I can to you.

Sample Copy.—Well, to tell you the truth, I don't know much. I've been thinking a good deal since we met this morning, and I am convinced that I should read the journals. I don't know much beyond rubber and amalgam.

Cash Subscriber.—I am glad to hear that you are on the road to knowledge, for when one learns that he knows but little, and has a desire to know more, then he is surely on the right road to knowledge. Now, tell me what journals you take, and what books you have in your library; it may be that I can advise with you to your interest.

Sample Copy.—Why, to tell you the honest truth, I do not subscribe for any journal, but I get sample copies that the publishers send out, mostly those from dental depots for advertising purposes, and since morning I've been looking over some of them, but I see they borrow every thing they publish, and I think it would be better

to have it first-hand and fresh. Now, if you will tell me of some of the best journals, I will send the cash for two or three.

Cash Subscriber.—I am delighted to hear you make such an honest confession, and I will take pleasure in naming some to you. Now, tell me about your library. What books have you? Standard works are as essential as the current literature.

Sample Copy.—Well, to tell the truth again, I haven't any books. I sold my text books, when I left school, and have not, before, thought that books were essential to a dentist's outfit. I believe I am beginning to wake up a little, and guess that I will get out of this hum-drum life, and rid myself of the fumes of the vulcanizer. Times are hard, but as I have heard that people speak of what you have to say on dental matters, and seem to think that you are up on all things. I am glad that you spoke to me in the depot this morning. I had an idea that you thought yourself a little better than the ordinary mortal, but I can readily see, since coming into your office and laboratory, that you are in the advance. Why, what's this?

Cash Subscriber.—That's a cataphoric apparatus for inducting medicine into dental tissues by the electric current. It acts well on many nervous patients, allowing you to excavate and fill teeth almost painlessly. I will tell you more about it. [Shows him other things.]

Sample Copy.—I see more light ahead. Strange that I have been hiding in such dismal ignorance. Say, wouldn't it be a good idea for me to join the State Society? You must get much benefit from such association. See what I've gotten from you already. My eyes are now opening. I have been going along in a groove long since worn smooth, but was content because of my ignorance. Thank you for acting the part you have. I will subscribe for some of the journals, and will order some of the books that you mentioned. Look out for me at the next State meeting. I shall no longer be a Sample Copy Dentist.

INLAY WORK.

This system of filling many cavities in teeth, especially buccal and labial cavities, anteriorly, is being made so perfectly artistic that it behooves every practitioner to familiarize himself with all details, and the experience of others. With the cheap, handy and efficient furnaces on the market, there is no excuse for much of the display of gold in teeth that might have been filled with porcelain. Below we give some points taken from an article by Dr. W. A. Copon in the *Stomatologist*. He says:

"The preparation of a cavity for the reception of porcelain is similar to that which is intended for gold or plastic work, excepting the edges, which must be made square to allow of a better joint. A slight undercut is all that is necessary, otherwise the impression cannot be withdrawn freely. Plenty of space is imperative if filling between the teeth, for, unlike other fillings, they are finished before inserting, and being a brittle, unyielding substance, there is danger of breaking if forced where the space is insufficient. The platinum foil must be thoroughly annealed and gently forced into the cavity with a small rubber tip and afterwards with an amalgam burnisher. The uninitiated are always dismayed at the hole that is invariably made through the foil, but that cannot be helped and is no objection. The most important part of the whole procedure is the second burnishing after the first baking. It is then that the edges are forced in place and the true fit determined. Carelessness or an oversight at this stage will likely prove disastrous to the filling, therefore I must impress upon you the importance of the second burnishing. When the filling is finished remove the platinum and cut a groove on at least two sides with a rubber corundum or diamond disk and cement into position. You may have excellent joints and a perfect shade, but the cement may

spoil all, especially those thin margin fillings where shade is the great requisite. Try to use a shade of cement as near the tooth as possible and mix thin, otherwise it may pack and keep filling from going into place. If this should occur withdraw it quickly and commence over again, then dry with hot air and cover with paraffin wax, rubber or sandarac varnish. In my estimation the best cement for this purpose is that called the Harvard, because it possesses great tenacity and is rather slow setting. For several years I used Justi's, which is an excellent material, but it sets too rapidly for most cases, although it has the advantage over the Harvard in resisting moisture before or while it is getting hard. Leave the dressing of the edges until thoroughly hardened, and after a time you will be pleased with the apparent blending of shade in tooth and filling that was temporarily changed at time of operation."

There are many discouraging things in the practice of this work; for instance, you may lose the filling when all ready for insertion, or it may drop and get stepped upon, or the fit may be wretched or the color away off from what was expected, but just say to yourself, others have done this satisfactorily and I will do it also. Your brother dentists may laugh and say they are no good anyway, for they will not last. If you feel that you are on the right track do not mind little discouragements and delays, for I have been through it all many, many times, and I am still pegging away and now have hundreds of cases to back my assertions and prove success. I have a filling in my right lateral, inserted by my brother nine years ago, and recent inspection shows it to be all right, and I have seen some put in by Doctor Land twelve years ago and apparently as good now as when first made. Bear in mind that this class of work is not easy and cannot be hurried over, for in no other branch of dentistry is that old saying more applicable, "First do it well and then do it easily."

POINTS.

H. D. WELLER, D.D.S.,
Indianapolis.

A sharp pointed penknife is very useful for trimming around plain teeth.

Broken pieces of glass are sometimes preferable to a rubber scraper in finishing vulcanite work.

If a small wooden handle be attached to the soldering pliers many a slight burn and by-word may be avoided.

It is always a good plan to have a solution of bicarbonate of soda on the laboratory work-bench to neutralize the sulphuric acid after pickling any kind of metal work.

The first essential point in putting in a good amalgam filling is a carefully prepared cavity, the next, absolute dryness of the amalgam while under manipulation.

Felt wheels such as are used on the dental engine are very useful on the laboratory lathe for polishing parts difficult to get at with the regular laboratory cones and wheels.

Jewelers' files are very useful in crown and bridge work. Much more can be accomplished with small files, especially around the crowns where bridge teeth have been anchored.

Before going to the chair to operate, wash the hands well with hot water and spray with good toilet water. The hot water will soften the hands and the touch will be more delicate.

Instead of decorating the floor and cuspidor about the operating chair with waste cotton, sand paper disks and strips, have a small waste basket handy at your right to receive the same. It will look more refined to your next patient.

A good matrix retainer for amalgam work if the filling be an approximal: First fit a very thin band of German silver around the tooth, making an over-lap on

the lingual surface, then adjust a tight-fitting rubber dam clamp over the middle part of band.

A good local anesthetic which will not cause sloughing or any other ill results:

Cocaine, 12 grains.

Atropia, 1-6 grain.

Carbolic acid, 8 drops.

Aqua dist. ad., 1 oz.

Sig. Inject from five to ten drops and immediately operate.—*Indiana Dental Journal*.

Setting Time of Plastic.

We take the following interesting extract from the *New York Medical Journal*:

In an article in *Treatment* for March 24th, Mr. D'Arcy Power and Mr. James A. Belcher state that they have lately been in the habit of mixing the plaster of Paris with salt solution to cause its more rapid consolidation. The results appeared to be so satisfactory that Mr. Belcher undertook a series of experiments to ascertain what effect, if any, various substances in solution had upon the "setting time" of plaster of Paris, with the following results: Two drachms of plaster of Paris, mixed with one drachm of 5 per cent. solution of sodium chloride, hardened in two minutes. Mixed with one drachm of a 5 per cent. solution of sugar, it hardened in three minutes and a half. Mixed with one drachm of a 1 per cent. sodium-chloride solution, it hardened in five minutes. Mixed with one drachm of a 0.5 per cent. sodium-chloride solution, it hardened in five minutes. Mixed with one drachm of a 5 per cent. calcium-chloride solution, it hardened in six minutes and a half. Mixed with one drachm of tap water, it hardened in nine minutes. Mixed with one drachm of distilled water, it hardened in nine minutes. Mixed with one drachm of saturated solution of sodium chloride, it hardened in eighteen minutes. Mixed with one drachm of a 5 per cent. solution of glycerin in distilled water, it

hardened in nineteen minutes. Mixed with one drachm of a 5 per cent. solution of white of egg in distilled water, it hardened in twenty minutes. Mixed with one drachm of a 10 per cent. solution of white of egg in distilled water, it hardened in twenty-five minutes. Mixed with one drachm of a 10 per cent. solution of glycerin in distilled water, it hardened in thirty-three minutes. Mixed with one drachm of a 25 per cent. solution of glycerin in distilled water, it hardened in sixty minutes.

These figures tell, says Mr. Belcher, their own tale, and show that where it is of importance to make plaster of Paris set rapidly it should be mixed with a 5 per cent. solution of common salt, and this may be made roughly by adding a tablespoonful of salt to a pint of water.

Food Adulterations.

The congressional bill for the prevention of the adulteration of foods, drugs and condiments, while not just what public health officers might prefer, should be opposed by those only who see increased profits to themselves by fraudulent additions to our food supplies. National legislation in this direction has long been needed for the saving of our health, our pockets and our foreign markets. It is the most economical and the only effectual way of dealing with this evil.—*Sanitary Inspector.*

"The Plate That Didn't Fit."

The dentist is often the victim of much gratuitous advice, as the following abundantly proves:

Dr. Percy Green, in *British Dental Journal*, indulging in an amusing article on reminiscences, among other things said:

While working at the chair one afternoon a man for whom I had made a plate opened the door and in a vary audible voice notified me that "that plate didn't fit." As

my patient in the chair was quite a prominent lady of the town I, of course, didn't want her to get the impression that my plates were failures, so I quietly answered him that perhaps the suction wasn't just right.

"Maybe that's it," he replied, "but if I was in your place I'd learn 'em to suck before I sent any more of 'em out."

It is needless to say that I have tried to profit by his homely, yet excellent advice.

Mending Rubber Plate.

Noticing a request by "D." in *THE WEEKLY* for a method of mending a vulcanite plate, as practiced in the laboratory, I will give mine.

Adjust the broken pieces carefully, drop some hot wax on the ligual surface, to hold them together, fill with plaster, set aside till hard. Then with a good size bur follow the break, cutting nearly through the plate, follow this with a smaller bur, cutting quite through the break from one end of it to the other. Brush out all chips. Warm the plate by dry heat, being careful not to heat it hot enough to warp; cut the rubber in small pieces, and with a warm spatula and an instrument to hold the rubber in place, burnish or pack the rubber where it is needed. A warm instrument will mould it like wax.

To flask, mix enough plaster to fill the flask, fill the lower section, set the plate with model in it, put on the upper half of the flask and pour in it the remainder of the plaster and vulcanize. Very little trimming will be necessary.

R. D. CRUTCHER.

Lewisburg, Tenn.

It is said that growth in height may continue until about twenty-five years of age; after fifty years a diminution of stature may follow. Weight may continue to increase until forty years, and after sixty to decrease.

THE
American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription **\$2.00** per year; **\$1.00** for six months—including Canada and Mexico; other countries **\$3.00** per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, May 12, 1898.

The Patent Appeal.

It will doubtless be pleasant news to the profession generally to know that the movement recently inaugurated by Dr. Ottolengui to have the patent laws amended, so that we may no longer be troubled with *process* patents, has taken definite shape and is meeting with much encouragement in Congress. The following explanatory notice from *Items of Interest* will be interesting to those who have not read it in that journal: "During the last month the Senate Committee on Patents appointed a day upon which a hearing was granted in the matter of the appeal for an amendment of the patent laws. Dr. Ottolengui visited Washington and appeared before the committee, attended by counsel. A general review of the situation was presented, and all the queries of the Senators answered. A brief was filed, together with letters from the presidents of the Consolidated and the S. S. White Dental Manufacturing Co., which

recite that the bill as drawn has their approval, and in no manner militates against the interests of manufacturers. Our petition, with nearly three thousand signatures, was also delivered. From reliable sources it may be announced that the Senate committee will not antagonize the bill, but in consequence of the war it has not been deemed advisable to press the matter yet in the House of Representatives."

This movement has not only been endorsed by nearly three thousand practicing dentists, but it has in addition received the endorsement of probably half the state societies, and at the last meeting of the Southern Branch of the National Dental Association was unanimously approved by that influential body.

It is, indeed, very apparent to any one that to discontinue issuing such obnoxious patents is the only permanent solution of the question. Just so long as it is legal to issue such patents just so long will we have them to contend with. The Dental Protective Association, under the management of Dr. Crouse, has fought a good fight and accomplished a great deal towards freeing the profession from the enslavement in consequence of such patents. But the Protective Association is a defensive organization and does not in any way prevent the same things from recurring from time to time—causing the same fight to be made over and over again. There is nor should not be any conflict between the two movements. One is designed as a permanent prevention and the other to combat existing troubles. It may not be possible at this time to get the required changes in the patent laws made, but as the only means by which we as a profession may ever be entirely freed from such abominable nuisances it behooves every practicing dentist to interest himself in the movement and in some way make an earnest appeal to his Representative and Senator to support the bill. It is very gratifying to see two of the most important manufactur-

ers, the S. S. White Dental Mfg. Co. and the Consolidated Dental Mfg. Co., come forward and advocate the measure by a written endorsement. With concert of action the dental profession is big enough and influential enough to get what we want, even in Congress. The ball is started; let us keep it rolling until the thing is accomplished.

H. H. JOHNSON.

Who is the Dogmatist?

Dr. Arrington: Do I understand you to distinctly say that pyorrhea begins at the apex of the root?

Dr. Pierce: Emphatically, yes; at the apex, along the same line as in the joints in connective tissue. It is at the end of the root that true pyorrhea begins, without any disturbance at the gingival border; the opening through the gum tissue is opposite the apical end of the root, the pulp being alive, though the external appearance is the same as that of an abscess from a dead pulp; the discharge is from the region of the apical end of the root, with the pulp intact. It is amenable to treatment. Remove the accumulation through that opening in the tissues. That is why I say that true pyorrhea is an expression of the uric acid diathesis, and must be treated constitutionally, with the addition of local treatment for the external expressions of the disease.—*Cosmos*.

Dr. Patterson, of the *Western Dental Journal*, adds:

When such erudite pronouncements come from prominent men in dentistry, is it any wonder that our profession does not receive the best recognition?

We are not seeking a controversy with these excellent gentlemen, but simply wish to observe that the "erudite" among us are recognized by not only the allied professions, but the laity as well. Those who are most in need of recognition, unfortunately, are that class who constantly "deny this,"

and "deny that," because, forsooth, *they* "never saw this," or "never saw that"!

Jenner and Harvey, not to mention a host of others, were victims to the same intolerant spirit. But in the shadow of the 20th century there is no place nor room for its unseemly exhibition, especially in the ranks of our rapidly developing profession.

Without entering into the merits or demerits of the question at issue, as a general proposition, one who has given a life-time study and investigation of any certain subject is entitled to be believed until his premises can be disproven.

J. A. C

The Military Dentist.

The French, usually equal to emergencies, have in some instances adopted the following scheme as related in *British Journal of Dental Science*:

Among appointments not usual in French regiments is that of a regular dentist. The difficulty for the immediate present has been got over in brilliant fashion by the medical officer attached to a certain battalion. Among the reserve men fulfilling their "twenty-eight" days' service was a well-known Parisian dentist. The doctor had him relieved from his ordinary duties and set him to work to attend to the teeth of all the men under his care. The dentist has done his task in thorough workmanlike style, and keen regret is being expressed among the privates that his time will soon be up. It is a pity he is not retained permanently.

Aluminized Gutta-Percha.

White gutta-percha.....	8 parts
Aluminum filings.....	5 parts
Oxide of zinc.....	1 part
Whiting	½ part

Easily manipulated, and when firmly packed holds its position well in the cavity without bulging.—F. W. Bliss, in *Pacific Stom. Gazet.*

The National Dental Association.

The next annual meeting of the National Dental Association will be held in Omaha, commencing on Tuesday, the 30th day of August, 1898.

Attention is called to the fact that all who were members of the American Dental Association and of the Southern Dental Association at the time of the formation of the National Dental Association, are now members of the latter organization.

The Constitution, Article III., Section 5, provides as follows:

"It is hereby specially provided that all persons at present permanent members of the American Dental Association and of the Southern Dental Association are permanent members of this Association, and entitled to all the privileges of the class to which they belonged without further action, and the treasurer is hereby directed to transcribe their names upon the roll of membership of this Association."

The officers of the National Dental Association will leave nothing undone to make the meeting at Omaha a success, and they hope the attendance and interest in the first active annual meeting of the Association will be commensurate with its importance.

By order of

THOMAS FILLEBROWN,
EMMA EAMES CHASE, President.
Corresponding Secretary.

Change of Meeting Place.

We are informed that St. Simon's Hotel will not be open in June. The island is very accessible to Spanish warships and may, at any time, be shelled and the hotel destroyed. Mr. Graham, of Tybee, invites the Georgia Dental Society there. His hotel is on the coast, but it is accessible to Savannah by rail, and can easily be evacuated if necessary, while St. Simon's is only accessible by boat. The proper authorities of the society will take notice of this and arrange accordingly.

To Remove a Pin Cemented Into a Root.

Most of us have had our patience almost exhausted by the trying ordeal of removing a pin which has been previously well cemented into the root of a tooth. It has long been believed that cement fillings last longer in a mouth where the saliva has an acid reaction, and Dr. Wm. B. Mead, in *Dental Cosmos*, has taken advantage of this fact to give us an easy and practical way to disintegrate the cement around a broken pin by the use of alkalis. His method is here reproduced in his own words:

"With a small abscess tubular knife in the engine hand-piece, I cut the cement around the pin as far up as expedient, and then, with a fine pointed hatchet excavator, proceed to finish the operation, applying aqua ammonia to decompose the remaining cement, and protecting the gum underneath with a piece of rubber-dam covered with a napkin, stopping occasionally to rinse the mouth with warm water."

He says ten minutes is sufficient for one operation. We have not tried this method, but will give it a trial the first opportunity, and hope others may do the same and report.

H. H. J.

"What Great Events from Trivial Causes Spring!"

The following, said to be "selected," we take from the April number of the *Ohio Medical Journal*:

"What's that book you're reading?" "*The Last Days of Pompeii*." "What did he die of?" "An eruption."—*New York Medical Journal*.

An Irishman refused to pay his doctor's bill, and when asked his reason, replied: "What shall I pay for? Sure, he didn't give me nothin' but some emetics, and niver a one could I kape on me stomach at all, at all."

Impression of Roots.

For the purpose of obtaining accurate impressions of the end of roots, Dr. Chupein has devised the following, which we take from the *Dental Office and Laboratory*.

He says: A small funnel-shaped receptacle is easily made by bending a piece of thin German silver plate, and soldering at the laps. After the root end is prepared, the root canal reamed out, and the dowel fitted, this little funnel is filled with Modeling Compound. The compound is brought up to a cone, and the dowel is pushed through to the full extent that it enters the root. The material is now softened, the dowel is entered into the canal and carried up to its full length into the root canal. The little funnel is then pressed up against the face of the root; the material pressing away the gum around the root end and yielding a very sharp impression of it.

After this Modeling Compound impression of the root end has hardened, it may be removed, and all excess trimmed away, which may be readily done with the sharp blade of the penknife. It is then returned to position and plaster of Paris put into the tray and a plaster impression taken with these little funnel devices in place, so as to obtain the position of the adjoining teeth.

The making of these little funnel devices is a very simple operation. A piece of hard wood like a lead pencil is placed into the lathe chuck and the end brought to a point. A thin piece of pattern lead is bent neatly over the point, yielding a pattern. This pattern is laid on a piece of German silver plate, 35 gage, and with a sharp point its form is scribed on the German silver plate. It is then cut out according to the traced lines and bent over the point of the wood pattern. The edges are slightly lapped and soldered, and this completes the operation, yielding a little funnel.

Our friends of the *British Journal of Dental Science* are a little careless about giving credits. Come, Cousin John, that won't do.

The Hero of the Hour.

Think and act as we should under normal conditions, yet the lightning changes of the hour impel us "hither and thither," until we find ourselves in the midst of a frantic populace, trying to excel the most patriotic in paying tribute to the hero of Manila.

All other themes pale into insignificance, compared with the one which has electrified every continent, and wrung unstinted applause from the "four corners of the earth."

We excuse ourselves and retire from the ranks of the "bread-winners," for the moment, to pay tribute to the cause and to the man who brilliantly demonstrated the supremacy of American valor. To harmonize with the occasion we paraphrase the familiar couplet:

"He that hath no fire in his soul and is not moved by concord of patriotic strains is fit for treason, strategems and spoils."

J. A. C.

Nickelsteel.

This alloy has several decided advantages over steel and may be specially adapted for dental and surgical instruments, says the *Journal fur Zahnheilkunde*. The higher the percentage of nickel the less it is attacked by water. Nickelsteel with 36 per cent. nickel cannot be injured or changed by water, as experiments have shown. Pieces of such alloy can be exposed to the moist air for a month without rusting in the least. Furthermore no expansion could be stated after pieces of certain sizes had been worked on by warm water and hot steam.

F. A. B.

Teeth are very often permanently discolored by the use of cinnamon oil, says Dr. H. B. Hickman, in *Dental Cosmos*. He says the discoloration will not appear immediately, but will gradually appear later on account of tannic acid, which is found in this oil. No bleaching agent has been found to remove it.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., MAY 19, 1898.

NO. 36.

GOLD OR AMALGAM?

My Dear Philip:

There are two general classes of dentists, the mercantile and the professional. It is to the latter that the subject of this letter is addressed. Of gold and amalgam you have asked me—which is best? That thought should be supreme in the mind of the operator, but so varied are the conditions which are to be met, that it would be quite as possible to name one remedy which would be a specific for all diseases as to name one method or procedure that could be applied to all cases when teeth are to be filled.

There are, however, some general rules that must at all times be observed. One is this: Where a cavity is to be filled, it must be prepared as carefully for one filling material as for another. It may be prepared differently, and it is not at all necessary that it should be shaped for amalgam or cement fillings in the same manner as for gold, but with the same care; for instance, a cavity may have undercuts that could be perfectly filled with either amalgam or cement, or other plastic material, which would be impossible to reach with gold, but all the edges and margins and defective tooth structure needs have the same care for one as for the other of these materials.

Another general rule is: Whenever a cavity is so situated that every part of it can be reached with a plugging instrument, and its walls sufficiently firm to bear the force of consolidation, gold is the best material at present known with which it can be filled. This, of course, refers to teeth of

average and above average density. This point I would stress, for the reason that amalgam, like bridge-work, has been very badly abused, and innumerable teeth have been sacrificed by the reckless and indiscriminate use of both. Too much amalgam is used. It is principally used in posterior teeth for reasons of economy, and because in those teeth it is not exposed to view, but it does not preserve the teeth as gold does; it is a mistake to say that it does.

Now, amalgam has a field wherein gold offers no competition, and it would be as futile and impracticable to use gold in such a place as to contour incisors with amalgam. Inaccessible cavities in molars are distinctly those in which amalgam is indicated, likewise are those posterior teeth wherein caries has progressed to a degree that renders it impracticable to fill them with gold, but which may yet retain sufficient strength of wall to support a filling. Then, again, some people are entirely too nervous to undergo the long and tedious operation necessary to insert large gold fillings. I would say that amalgam is often best for such cases. I could not undertake to enumerate all the conditions which would indicate the kind of filling to be inserted; that must be left to the sense of discrimination of the operator, but the main point I have in mind in writing this is that too often dentists tell the patients that in posterior teeth amalgam is just as good as gold, and such a large percentage of mouths have their posterior teeth black with amalgam, when there was no necessity for putting it there. A good amalgam filling is better than a poor gold filling, but a

good gold filling is better than a good filling of any other material, so far as a protection from decay is concerned.

The black color of amalgam does not offer a serious objection. I could respect a filling as black as the shades of Erebus if it preserved the tooth, and such fillings do seem to be far more effective than those which retain a brighter color in the mouth. This latter class, so far as my observation goes, fails to perform the function of a tooth-saving material.

How often do we see teeth filled with non-tarnishable amalgam, in a short time disclosing a crevice, wide open, around the entire extent of the cavity. Of course it can be but a short time before these fillings must be removed and others inserted, which each time requires a sacrifice of tooth structure, in addition to that already lost by caries. With gold it is not so, it will not shrink, nor change shape; placed in absolute contact with the cavity wall, it will remain there and will preserve the tooth. The only way for the filling to fail, is for caries to again attack the tooth from the outside as in the first instance.

Now tinfoil, it is conceded, will, measure up to the highest standard of tooth-saving materials. But, alas! it cannot be shoved in a cavity as quickly as can amalgam, but requires all the care and dexterity of manipulating gold. With the average dentist no more compensation can be had for such service than if he were filling with amalgam, hence it is very little in use. Gold and amalgam are the two materials that the world looks upon for permanent fillings. Each has its respective place, viz.: Gold to be used in every case where the situation of the cavity and condition of the tooth will admit, both in posterior and anterior teeth. Amalgam to be used where gold cannot. Its place is secondary. It is false economy for him who would save his teeth to have them filled with amalgam under the delusion that it is just as good as gold.

Now, my dear Philip, if in practice you will discard the idea that amalgam is good enough for the posterior teeth, I will feel that my letter has done some good. I know you are fully capable to manipulate gold where your judgment tells you to put it.

D. D. ATKINSON.

ITEMS FOR CONSIDERATION.

DR. B. F. ARRINGTON,

Goldboro, N. C.

Scrupulous and appropriate cleanliness of person, office and instruments, daily observed and religiously practiced, will very greatly diminish necessity for use of disinfectants, sterilizing agents, etc., to check progress and destructive features of the harmless little armies (much magnified) of microbes, bacteria, and the like, seemingly a great terror to some dentists, who would doubtless be more practical and useful as dentists if their thoughts and energies were applied to something larger. It is best never to "strain at a gnat and swallow a camel." The question is yet to be settled, whether the presence of such minute animate matter is designed for evil or good. If for evil, we are gone up, unquestionably, for there is no getting at the fountain-source to exterminate. They are legion, and everywhere; always have been, and possibly always will be. They are of God's creation, have a service to perform, and while performing merit a living; let them have it. Teeth and gums treated and teeth filled forty and fifty years ago—long before the germ and microbe theory, sterilizing instruments, etc., were sprung and advocated, as for some years past—was a success, and no evil consequences followed any more than at present.

Never use more remedies in practice than requisite, and never persist in the use of a remedy as superior to others until you have compared and faithfully tested for merit.

Use gum-lancet freely for relief of chil-

dren during teething period. Much relief will be afforded and death prevented sometimes.

Never cut around teeth or roots to be extracted if forceps can be successfully applied without it; but if you have to cut, cut for effect, and be sure to get a secure hold before attempting to extract, never losing sight of the fact that in the operation of extracting teeth a *rough success* is more appreciated than a *delicate failure*.

Never attempt the filling of proximal cavities until ample space is provided; and in filling deep cavities with gold or amalgam be careful to protect base of cavity with some reliable non-conducting material, to avoid injury to pulp and consequent discomfort.

The preparation of cavities for any filling material should be the same in every particular, and the same care in introduction of material and finish of same should never be slighted, lest evil consequences should follow.

The desire and ambition of every dentist should be excellent results, if possible to be attained, not only in filling but in every service rendered for health and preservation of gums and teeth.

Never stuff cavities with amalgam or gutta-percha at the commencement of filling; small quantities carefully manipulated for perfect adaptation and solidity, and to insure freedom from leakage, is safest practice. All filling material should be carefully inserted and finished.

Never rush operations to make rapid headway; if you do, failures and complaint may follow quickly.

In the use of gutta-percha or amalgam strive for best results possible, as in the use of gold. You will preserve more teeth and will think better of yourself as a dentist, and your patrons will think better of you.

In shaping cavities, nearly perpendicular walls, with slight underslope, is surest guarantee for retention of fillings.

Never jeopardize pulps by making retain-

ing pits. A cavity rightly shaped will hold filling without the aid of retaining pits, therefore the use of them should be discarded.

In rendering service for preservation of teeth always consider the interest and comfort of patients more than self; otherwise, much you do will be unreliable and will cause dissatisfaction.

You can and may safely venture to vary in selection and use of material, but manipulative ability and skill must be applied the same under all circumstances and conditions, or there can be no dependence in service rendered.

Never attempt to crown or bridge on roots defective at apex; if you do, it will be safe to predict failure, and evil consequences will follow in a limited period, and patients will realize that there was dishonesty or want of good judgment and skill, either of which would prove hurtful to the dentist and lowering to the profession.

Integrity and skill must couple in all work for preservation of teeth; the principles of the "golden rule" should guide.

Never advocate a principle in theory, or any line of practice as exactly right and correction or improvement impossible, but think and act independently and strike out boldly, analyzing and experimenting for results and facts; and if obtained results, repeated and well established, conflict with previous teachings and preconceived ideas, hold to results, advocate and herald them, and practice accordingly. It will be better for you, better for patients, and better for the profession, for it is the only sure way to lift out of old ruts and make successful progress.

If you have commenced practice inflated with the idea of high prices and rapid gains, be undeceived, for there is only so much for you, if you follow, as you should, an honest professional line of practice. Possibly nine out of ten (a fair average), if endowed with fair attainments and skill and becoming professional bearing, and close application

to office duties, may reasonably hope to meet expenses (legitimate) annually—very little, if any, more.

Ten years hence the prospects for profits will be less encouraging than to-day, and many, possibly, will wish they had never embarked in the practice of dentistry.

CATAPHORESIS.

CHICAGO, May 4, 1898.

A rare treat was offered the Chicago Dental Society last evening in the shape of a paper on Cataphoresis by Mr. Loob of the S. S. White Dental Manufacturing Company. It was the first meeting of the fiscal year of the society, and I believe that the members who are down for papers in the future will have a hard task before them if they expect to offer their listeners any such benefits as they must have derived from their attendance last evening.

The paper was full of facts, and covered such a large field that to discuss it adequately would require an essay probably twenty times as long as the lecture itself. I am certain that every one will be delighted with this practical paper when it appears in the *Dental Review*. It may perhaps not be amiss to pick out a few points on which Mr. Loob dwelt, in order to impress them the more forcibly on those who may have occasion to read the article later on.

Too much stress can not be laid on the necessity of thorough insulation of the tooth to be operated upon. Mr. Loob suggests a manner which I have been practicing for some time, and therefore can thoroughly substantiate from a practical standpoint of what he spoke last evening. In *Catching's Compendium* of 1896 I described this matter once before, which is as follows: Apply the rubber dam first to as many teeth as you would desire to have in view to work upon the tooth properly, aside from the cataphoric work; next apply a second piece of rubber dam over this first piece, leaving

only the tooth exposed on which you desire to use the current. Dr. V. B. Ames's suggestion in regard to insulation brought out in last night's discussion will complete this method so as to make it almost universally accurate and successful, and they were principally the avoidance of clamps and ligatures, using in their stead thin oxyphosphate of zinc to secure the dam, and in large interproximal spaces where the approximal cavities are deep, to snip the little piece of rubber between the teeth and cover the space with thin oxyphosphate of zinc. The holes in the rubber dam should be as small as they practically may be, in order to hold the neck of the tooth tightly.

Another very valuable point brought out in the paper was the advisability of the use of storage batteries in preference to the ordinary incandescent current. Through the kindness of the S. S. White Company, by allowing me the use of various instruments for experimental purposes, I wish to say in regard to those experiments that I at one time had my apparatus rigged up in such a way that I could use either the battery or the incandescent current on the same case with practically no interruption in changing from one to the other. I was surprised to find how quickly the galvanic needle began to fluctuate as soon as the incandescent current was being used, showing the quality of the current, each fluctuation (due to the manner in which the armatures are wound in the electric dynamos) causing pain, and the variations being in such quick succession (indicated by the constant swinging of the needle in the galvanometer), producing almost constant pain. This alone, aside from any other serious objection, should be sufficient reason to abandon the use of the ordinary light current.

As to the time required to produce anesthesia, I wish to add that I think that it is an error of judgement to try to produce anesthesia too quickly; the result of such a procedure will be to electrolyze the tooth,

getting simply the anodyne action of the anode, and instead of causing the medical solution to pass into the tooth it will become decomposed by the quickly turned on current into its chemical constituents, which may remain then either inert or possibly cause damage instead of benefit.

The size of the electrodes should not be lost sight of. The negative electrode in use in my office, described in *Catching's Compendium*, 1896, consists of a large felt mat, which is moistened before use, and is contained in a rubber bag.

As before stated, the time and space allotted here is entirely inadequate to discuss a paper of this magnitude. H. H. S.,
Chicago Correspondent.

Thread Cutting Pliers.

The following practical point we take from an article by Dr. Chupein in *Dental Office and Laboratory*:

There is on the market a pair of flat-nose pliers designed for cutting a screw on the dowels of crowns, the better to secure the crown in the root, when either cement or gutta-percha is used for this purpose. Such a pair of pliers may be easily made by any dentist, as follows: A pair of flat-nose pliers are obtained. The temper is taken out of the noses by heating red hot. Holding the noses tightly together by pressing the handles together, a small hole is readily drilled between the noses, about one-fourth of an inch from the end. A screw thread is then cut in this hole, when the pliers are retempered. By placing the tapered dowel in this threaded hole within the nose of the pliers, and backing the dowel out, a thread is cut on the dowel as shown. This may be done either before or after the crown is completed.

A boy fell from a street car in Washington City and broke his neck. The *Maryland Medical Journal* says laminectomy was performed and the boy's recovery is favorable.

PLEA FOR DENTISTS IN THE ARMY AND NAVY.

BY WALLACE WOOD, JR., D.D.S.,
New Orleans, La.

I have often wondered why the United States Navy Department does not make some provision for the services of a dental surgeon for the officers and crews of the various vessels, especially since good teeth are almost the first requirement of a recruit for enlistment. Quite frequently her largest men-of-war, with a crew of several hundred men, are absent from home for a period of several years in foreign waters where the attention of a dentist cannot be obtained, thus relying on the unskilled use of the forceps in the hands of the ship's surgeon or druggist, and thereby depriving the unfortunate patient of his fitness for reenlistment, to say nothing of the cruelty and the suffering to which they are frequently subjected. I have seen a number of fine, hearty looking seamen rejected by the recruiting officer simply because of a missing molar or so, whose mouths, at the hands of a dentist, could have been made as perfect as nature, so far as mastication is concerned, and in a very few minutes, at a small cost; but unfortunately Uncle Sam was deprived of several good, able seamen at a time when their services are most urgently desired. This might also be practically applied to the conditions existing in the army where regiments are quartered in isolated outposts such as the western frontier. But strange to say, the most careful arrangements have been made for the services of veterinary surgeons for the medical care of the army stock, which amounts principally to veterinary dentistry. These surgeons are employed at fairly good salaries and are commissioned and assigned to the different regiments in a similar manner to the regular army surgeons. Surely if such careful

attention is given to the teeth of government mules and horses it certainly seems plausible that the sailors and soldiers of our country should receive an equal amount of the benefits of dental science which are frequently of more importance to the comfort and health of her men than medical attention.

The United States leads the entire world in the scientific advancement of dentistry, and should be the first of all nations to succor her brave defenders with its comforts and benefits, and assist in maintaining the physical perfectness of her men instead of adding to their depreciation.

I firmly believe if the attention of Congress could be obtained, this grave and serious neglect to the physical welfare of the navy and army would soon be rectified, and arrangements would be made through the medical department for the services of a number of dentists, to be commissioned with the rank of a staff officer and assigned to the different cruisers, battleships and posts, to remain for a period of sufficient time to place the teeth of the entire crew in perfect condition, and then to be assigned to another vessel and post, and so on until the entire navy and army could receive their attention, keeping constantly in the service a corps of practitioners who could at any time be assigned to duty wherever necessary.

Treatment of Pulpitis.

In the event of pulpitis or inflammation of the pulp, cleanse the cavity by using warm water and apply a small amount of pulverized thymol over the pulp. If the pain still continues, add one drop of chloroform to the applied drug and immediate relief will be afforded.—*Dr. Chupein.*

Something cheaper than gold for dental plates may be made, but nothing better can be made if metal is to be used.

SOCIETY SAUCE.

A long paper, unless it is of unusual interest, is a bore to societies.

Society meetings are now taking place rapidly. Have something to say, say it, and be done.

The society gas-bag is beginning to inflate. No, he can inflate on the spur of the moment. No, he is always inflated.

Dr. Tellitall will be on hand. He and Dr. Knowitall will add much—discomfort—to the meeting

One member of the Georgia Dental Society had "the floor" sixty two times last year. What did he say? Nothing, only gaseous eructations.

A leatherhead in the chair will have a slipshod meeting.

The clinician's task is a thankless one. He is watched and criticized. Not watched and complimented, because every onlooker thinks that he can do it better.

There is as much egotism to the square inch in the average dentist as there are square feet in Rhode Island.

Bosh, a German physician—and some think all medical lore must come from Germany—says: "Refrain from scarifying the gums of children with the idea that dentition is a pathological process." If the lancet were used oftener in the "teething process" there would be less mortality amongst children. Some things seem to be held from the wise.

A Meeting Fried.—At a meeting on Lookout a few years ago, one Mr. Fry was put up at the banquet to make some kind of a speech. He struck out on something about the resources of Chattanooga, and spoke for hours. We were sitting near Dr. Kirk, of Philadelphia, who was loaded for a speech, but Fry would not let him. Every one tired of the fellow, but he continued. One after the other left the hall, but he did not seem to notice it. On he

went. The hour of midnight came, and still he talked. Finally, from sheer exhaustion, he ceased; when the few who remained throughout the ordeal silently arose and sought their couches to dream that they were being Fried into cracklings. Moral: Look out for the windies.

TIN-FOIL.

Many of those dentists who give their attention to saving the teeth, have recognized the superior quality possessed by tin foil as a filling material. Scarcely a journal nowadays but that has some sort of an article on this important subject.

One which is of peculiar interest we take from *Items of Interest*, written by Dr. H. L. Ambler. It seems that if the prevailing custom of filling with amalgam was largely substituted by a demand for tin, the people would profit by the change. Dr. Ambler writes as follows:

"Tin-foil should always be handled with clean pliers, and never with the fingers, and only enough should be prepared for each case, keeping the remainder in the book placed in the envelope in which it is sold, otherwise some extraneous matter collects upon it; when exposed to the air for a great length of time it will oxidize slightly.

In using this metal for filling we completely protect the underlying tooth structure, and if we comprehend the material and how to manipulate it, we will surely be rewarded by success in saving carious teeth.

The extra tough foil which can now be obtained, is chemically pure, and in the presence of perfect dryness we can take it and begin at the base of any cavity, and with hand or mallet force produce a filling which will be one compact mass, so that it can be cut or filed without separating into layers. On account of its pliability it is easily adapted to the walls and margins, and a perfect fit is made, thus destroying capillary action and preventing further decay. Of all the metals used for filling, it

is the best tooth preserver, and most compatible with tooth substance, and the facility with which a saving filling can be made, largely commends it. Gold in contact with immature dentine, by reason of great thermal change, may prevent complete calcification; also, when dentine contains an excess of organic matter, as young teeth do, we believe that when caries begins the process is increased by thermal changes, which induce galvanic currents, attended by chemical action.

In such cases, if a metal is used, tin is good on account of its low conductivity, and because it does not change its shape after having been packed into a cavity, for contraction and expansion are detrimental to any filling material. Under tin, teeth are calcified and saved by the deposit of lime salts from the contents of the dental tubuli; we term this progressive calcification.

The oxygen in the saliva helps blacken the tin, and the metallic oxide permeates the dentine more or less, acting as an antiseptic and a protection, because it is insoluble in the oral fluids. When there is a battery formed in the mouth containing tin fillings, and gold fillings, and the fluids of the mouth are the exciting media, tin will be the positive element and gold the negative element; thus when they form the voltaic pile, the tin becomes oxidized and the current practically ceases. When tin fillings have been removed we have often found that the dentine was somewhat discolored and greatly solidified as compared with its former condition, and we believe that this calcification or solidification is more frequent under tin than gold, which is partly due to its being such a poor conductor of heat. We have also seen cases where the pulps have partly calcified under tin fillings, and it has been known for many years that tin would be tolerated near the pulp without causing any trouble, and we feel sure that one reason is on account of its low conductivity.

Gold is nearly four times as good a conductor of heat as tin, and more than six times as good a conductor of electricity.

ITEMS.

Warm water may be quickly and conveniently obtained by immersing an electric light bulb in the bracket glass.

A few drops of ammonia in the gold tray will render old scraps of gold sufficiently cohesive to work quite as well as new, provided they have not been wet.

Best results in cleaning teeth may be obtained by adding peroxide of hydrogen to levigated pumice to the consistency of cream, and applying to all of the teeth by a small twist of cotton on the end of an ordinary toothpick, and then removing with small brush wheel on engine at a high speed.

If 50 per cent. solution of peroxide of hydrogen is prescribed as a mouth wash, for several days previous, it will greatly assist in scaling off heavy deposits of hard tartar.

Many methods of separating teeth to facilitate egress to approximal cavities, and lateral movement in regulating have often been offered to the profession, but the most successful one I have found was suggested to me in a moment of impatience, by cutting off a small square piece of rubber dam and rolling up between the thumb and forefinger. Any size can be quickly made in this manner, and by touching with a drop of sandarac varnish before stretching same between the teeth, crowding on the gum may be prevented. The ends may be stretched and then clipped off in the usual manner.

WALLACE WOOD, JR., D.D.S.

New Orleans, La., May 5, 1898.

Setting Time of Plaster.

Somehow or somehow else our compositor will persist in setting the word plaster into plastic. About one hundred times we have caught the word in proof-reading, but in the last issue it went whizzing through over an article that should have had the above heading.

Bleaching Teeth.

Some time ago we had two teeth to bleach which had been stained by dead pulps and decomposed blood and iodoform. After all decay had been removed, they were washed with a pyrozone solution of 3 per cent; then powdered alum and Labarraque's solution of chlorinated soda was introduced for about five minutes. This removed some of the coloring matter. The cavities were then washed with borax water 10 per cent. We then used a saturated solution of sodium peroxide for about ten minutes, and the cavity was then washed with 10 per cent. sulphuric acid. This was neutralized with a 2 per cent. solution of carbonate of sodium. The teeth were still somewhat black, and we gave it up for the day. Next day 25 per cent. pyrozone was used, but the teeth were still discolored. We then used the alum dry in the tooth, adding the solution of chlorinated soda for about ten minutes, and the bleaching was perfect. The cavities were then washed with a solution of bichloride of soda, then dried, and the interior painted with a solution of white paraffin dissolved in ether.

A thin oxychloride was packed into each cavity and allowed to harden. This was covered with oxyphosphate of zinc, and the teeth were left for a week. They were then filled with gold, and the color is perfect, as they both look as natural as the adjacent teeth. All of the exposed dentine was covered with gold, so that no percolation from the outside is possible. Did we take too much trouble for the result?—*Editorial in Review.*

There are not many odors more disagreeable than that of an old crown or a bridge. Dip them in electrozone and they will be deodorized immediately. Thanks to the *Dental Review* for the above. Such odors are hard to remove from the hands, and above all, let a dentist have odorless hands.

THE
American Dental Weekly
 ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription \$2.00 per year; \$1.00 for six months—Including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, May 19, 1898.

Re-elect the Good President.

We feel perfectly sure that the best interests of a State dental association would be better subserved by continuing a good presiding officer in office, than by playing to the ambitious office-seeker and electing a new and untried president every year. It is a lamentable fact that those who seek the honor of such an office, seek it solely for personal ends, and when the office is done with them, they are done with the society. Count the number of ex-presidents in any State who suddenly lost all interest in associate work. They have all they wanted, and having that, they make no sacrifice for the good of the association.

We should like to see the Georgia Dental Society start this innovation, for innovation it surely would be. Why drag along in an old way that is not for the good of the society, even though a radical change is made, when such a change can best benefit associate work?

We have been told that those who have the presidential bee buzzing in their hats would remain away from the meetings. If that be so, would it not be well to let their names be known, for surely they would feel no interest in the society as ex-presidents, and would follow the wake of the dozens who have gone through the same channel.

The city of Savannah has in it five ex-presidents of the Georgia Dental Society. One of these is a member of the Examining Board and attends every meeting of the society. One has only recently filled the office, and it remains to be seen what he will do. The other three are conspicuously absent from the meeting and have been for a long time. If it kills a man's society interest to make him president, it is better for him that he be not made president.

Clinic by Proxy.

We cordially invite readers of the WEEKLY to contribute a clinic to the Georgia meeting by proxy. Send us a practical method or device, and we will deliver it at the meeting, and give due credit to each clinician. Make them short and to the point. Send a model, if necessary, with a case. Little laboratory and operating hints always awaken interest. It is our purpose to have a "Round Table" at the meeting, and for this we invite our readers to send the items. After they are delivered at the meeting they will be published in the WEEKLY for the benefit of all. This proxy clinic is something new. Let us see what we can make of it. That little simple thing that you have been doing in your laboratory or at your chair is what we want. We will call it the "American Dental Weekly Round Table: Contributed by Its Readers."

Ivy Poisoning.

The *Medical World* says bathing the parts in a solution of sodium hyposulphite will effect a speedy cure.

Volasem an Antidote to Cocain

Dr. G. Lenox Curtis was a pioneer in the cocain domains, having used it as early as 1885. He contributes an interesting article on the effects of the drug and its antidotes which is taken from *Items of Interest*. He writes thus:

"I have had a varied experience with it. The cases of cocain poisoning I have had to treat are numerous, and many an unhappy hour have I spent in restoring my patients. Continually searching for a drug that would antidote it, I have finally found one in volasem. For over two years I have in all cases used this drug, giving it immediately before the administration of cocain, in doses of one to two drops in a little water, and it is more rare for me to see an untoward symptom of the toxic effect of cocain than it was not to see it in previous practice. I used it then as I do now, by application and by hypodermic injections, but was very guarded as to the quantity used. Now I use it unhesitatingly for any and all my patients, and in unlimited quantity to produce the desired result, in strength of four per cent. to a saturated solution. I feel that I can most heartily recommend this antidote to you. In case your druggist cannot supply it, it can be procured from Kellogg & Co., Fifty-eighth street and Sixth avenue, New York City.

"I consider cocain a dangerous drug in the hands of the unskilled without a reliable antidote, and even then, as with all other drugs, he should have a knowledge of how to meet conditions as they arise. The poisonous symptoms of this drug are variable. While most patients are affected alike, many develop odd symptoms. Meet the symptoms as they arise and endeavor to keep the patient in a normal condition. Cardiac and respiratory stimulants are the most necessary. I chiefly use the following hypodermatically:

Tinct. digitalis gtt. 5-10
Spts. frumenti 5ss to ʒii
Strychnia sulp. grs. 1-60 to 1-30

"When it is necessary to use these, do not depend upon them alone, but loosen the clothing of your patient, wrap warmly, apply hot water bottles, working to establish the circulation and respiration, employing the reclining or sitting posture as the case requires."

Meeting of Tennessee Dental Association.

The 31st annual meeting of the Tennessee Dental Association will be held in the auditorium of Lookout Inn, Lookout Mountain, Tenn., commencing July 5th, 1898, and continuing 6th and 7th. A fine program is being prepared, consisting of papers and clinics by eminent men of the profession. The Inn has made the exceedingly low rate of \$2.00 per day for members and visiting friends. Excursion rates on all railroads to Lookout Mountain.

CHAS. H. SMITH,
Secretary.

Tennessee State Examining Board will meet at Lookout Inn Monday, July 4th, 9 A.M. All applicants for examination must present themselves on that day.

Dr. J. L. Mewborn, President, Memphis;
Dr. F. A. Shotwell, Secretary, Rogersville.

Early Clinics.

Below we give a clipping from a paper by Dr. J. Taft, in *Dental Register*, the first part of which recites an interesting bit of history, and the last part we offer as a hint to those who sit around with folded hands at society meetings and never offer to give clinics for the benefit of others:

"The first presentation of clinics in our profession was made about the year 1859, in the Indiana State Dental Society, at Indianapolis. The late Dr. Wm. H. Atkinson, of New York, and Dr. P. G. C. Hunt, of Indianapolis, were the active workers in this, one of the first public clinics. This mode of instruction in our profession is

one of rapidly increasing utility. It is the means by which every new and available device and invention is brought to the attention of the profession; so that the attainments in the profession are made the common possession of all who will receive.

"For the position and status enjoyed by the dentists of the country we are indebted to dental societies, and largely to State societies."

Replanting Case.

In number 31 of the AMERICAN DENTAL WEEKLY there appeared a case of replanting two teeth that had been removed by an accident. I have had under treatment several cases of replanting, and will say with one exception have been successful. A young man twenty years old came to me to have what I supposed was a decayed second left superior bicuspid extracted. I used a pair of root forceps, and found only a shell, which was completely crushed. The hemorrhage was great. I wiped the blood away and found that "some tooth" remained. This I extracted and proved it to be a perfect bicuspid. Immediately upon discovery I replaced it, pushing it far up, and in its original position. It gave no further trouble other than being sore for a few days. The tooth grew down and is now perfect both in form and in relative position.

WILLIAM E. GOUCHER, D.D.S.

Jamestown, N. Y.

For Carbolic Acid Burns.

Bathe the burned tissue freely with alcohol, or touch the burned area with chloroform. If this is not employed soon after the burn, however, it will have little or no effect. The *Univer. Magazine* says, when some time has elapsed since the burning brush the parts with a saturated solution of picric acid in water.

Where Are You Going?

Suggestions are in order; here is one: The most restful, healthful and delightful outing is a camp in the mountains. We have tried it and know whereof we speak. It would be well for several dentists and their families to join in an outing of this kind. The expenses for such a trip are much less than for any given length of time at a watering place. Not half so much. With fishing tackle and gun to engage the attention of trout, turkey, deer and bear; with a supply of light reading-matter and plenty of hammocks to while away the idle hours; with the invigorating air and pure water; with the necessarily increased appetite—all nature's medicines—the tired dentist soon begins to feel himself again. There are no prettier mountains, no grander scenery in Switzerland than in the mountains of North Carolina. It is where civilization grows extinct, and where Dame Nature dominates in realms beyond comparison or description. Tents can be rented and the appurtenances be carried from home. Have you thought of such a trip?

Prof. Boenning gets off the following in the *Stomatologist*:

A negro preacher called to see an old sinner who was sick. The sick man said "he felt some misery in his side, and was cold, terrible cold." Parson Jackson suggested prayer. Brother Jones said "yes." Parson Jackson prayed "that the warmth of the sun might fall on brother Jones; that he might feel a gracious fire stream through his veins; that he might be plunged in a flood of flame; and"—the parson's rhetoric was exhausted; but, quivering with excitement, he gathered all his energies for a final grand appeal for the shivering Jones, and shouted at the top of his voice, "Yes, give him hell!"

Preparing and Handling Soft Foil.

Non-cohesive gold will always have its place in filling teeth. And there are many who claim that better operation can be performed with it than with the cohesive. Let that be as it may, there is a use for soft foil. And here is the way Dr. Lord prepares and handles that form of gold. We clip from the *International Dental Journal*:

I use Abbey's foil, and prefer No. 5. I cut a sheet generally into four pieces; if the cavity is small, I would cut the sheet into six pieces. I fold each piece into strips, for the larger cavities about an eighth of an inch wide, and for the smaller ones a sixteenth of an inch.

For the folding I use one side of my shears, instead of a table-knife or a paper-cutter, and I fold on a small cushion made of soft leather and filled with wool. I prefer this to anything harder. The strips are placed on a folded napkin, and I use the point of the instrument with which I am working to pick up the strip and carry it to the cavity. I usually cut the strips into two pieces, sometimes three. The instrument that I use and depend upon mostly for placing, uniting and condensing the folds is properly curved at the end, and an absolute point made by a very short bevel on three sides with a sharp file, and the fourth side touched at the point very slightly with the file, so that the line of the curve may not be changed.

I do not, as would be understood, condense with the point of the instrument, but with the side and edge of the bevel, and unite the folds with the point.

I strive as far as possible, in placing the foil in the cavity, to fold the strip in so as to form a loop and bring the loop to the surface.

I prepare and use tin-foil the same as I do gold, and also gold and tin in combination. I use three parts gold and one of tin when combining the two metals, folding them together with the gold outside.

A tooth having a cavity with four walls, which, of course, is the easiest kind to fill. I begin by putting the first piece against the most distant part of the cavity and the second piece against and into the first piece with a hard, firm pressure, and so on against the walls, and filling in the center as is required, to the end.

To fill a compound cavity or one with three walls only, I would pursue the same method, by placing, uniting and packing against the walls and filling in the center, and finish by building up where the wall of the cavity was wanting.

Salicylic Acid Harmful.

Salicylic acid appears to be the most common of all substances used to preserve canned goods or other articles of diet. Its deleterious action on the human organism is well known and depends largely on its destructive influence on organized ferments. In this manner it hinders digestion and the assimilation of nutritive material through its action on the buccal, gastric and intestinal enzymes. Legislative enactments against its use as a preservative should be stringently enforced. — *Pennsylvania Medical Journal*.

To Make Artificial Teeth Look More Natural.

The artificial teeth of to-day are unnatural in that they are baked to yield a glistening appearance. A diminution of this high glossiness is what we should hope to attain. By dipping artificial teeth, prior to setting, into hydrofluoric acid, the surfaces become more lifelike. Select the color with reference to the complexion and age of the patient, and never permit the latter to lead you from the path of professional knowledge; rather choose teeth somewhat darker than you first conclude. The teeth always appear lighter when placed in the mouth than they do when on the wax base-plate. — *British Jnl. Dental Science*.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., MAY 26, 1898.

NO. 37.

NEW YORK LETTER.

May 20, 1898.

The Central Dental Association of Northern New Jersey held its regular April meeting to listen to a paper by Dr. C. Edmund Kells, of New Orleans, on

"COMBINATION FILLINGS."

In his absence the paper was read by Dr. Ottolengui, the editor of *Items of Interest*. It was a sort of "off night" with the "Hornets"; discussion was slow, and as the attendance was slim, but little was done, so I am informed.

The doctor sent some of the instruments he uses for inserting the amalgam in this work, which by the way is the base, and then places the super-filling of gold over that.

This month the Jersey Society had as essayist Dwight L. Hubbard, M.D., of New York, who is one of the professors and also Dean of the New York Dental School. His paper was entitled "Some Contributory Causes of Disease of the Antrum."

As with all of Dr. Hubbard's work, the paper was more than interesting. Those present (were very few again, this time owing to the heavy rain) apparently did not feel equal to entering upon a discussion of the subject, but confined themselves to asking questions. In fact, so few of us meet with antrum troubles in regular practice, to elucidate the subject by queries is more profitable than attempting to discuss the same. All Jersey Society meetings are preceded by a dinner, to which the essayist and those to participate in the discussion of

this paper receive invitation. There may be anywhere from 25 to 150 about the "board" upon these occasions, according to the occasion or the season of the year, etc. Whether there are few or many, the hospitality of the "Hornets" is pronounced, and one always enjoys an evening among them.

The New York Institute of Stomatology had a meeting rather out of the ordinary on May 3d. It was an afternoon and evening session, at the Windsor Hotel, on Fifth avenue, with the regular dinner of the hotel between the two sessions.

The afternoon meeting was promptly called to order at the appointed hour 3:30, with the President, Dr. E. A. Bogue, in the chair.

There were fifty or sixty representative dentists present. Drs. Jacob L. Williams and W. H. Potter represented Boston. Dr. H. C. Merriam from Salem, Mass; Drs. Wilbur F. Litch and Louis Jack from Philadelphia; Dr. John B. Rich from Washington, D. C., and Dr. B. Holly Smith from Baltimore, were among the prominent visitors.

The first paper was by Dr. Wm. H. Potter, of Boston, on "Independent Journalism." He had taken considerable pains to ascertain the number and standing of dental journals the world over. He found but few, very few, strictly "independent"—more apparently in Germany than elsewhere; fewer in the United States than elsewhere; omitted any reference to THE WEEKLY; either did not know of it, or else did not consider it what it is, an "independent."

He referred to the desire of the Harvard Odontological Society to have its papers, etc., published in a strictly "independent" journal, and narrated how they eventually found an obscure dental publication west of the Mississippi in which they published their transactions rather than use a trade "journal." He emphasized the need of money to successfully carry on an "independent" publication.

In the following discussion Dr. Merriam, of Salem, Mass., narrated a case where an eminent practitioner had presented a paper on a very interesting subject, the report of which was carefully made to be cut down to *one line*, in a trade journal—completely losing all its value.

Dr. Jacob L. Williams referred sarcastically to "dental parlors," and the advertisement in trade journals of many articles of doubtful value, etc.

Dr. Ottolengui, the editor of *Items of Interest*, being called upon, ably defended "trade journals." He said there were about 25,000 dentists in the United States, of whom 2,500 are members of societies and only about 1,000 of them real scientists. He claimed that "trade journals" were better able to present the papers and reports of societies because they could afford to spend more money in preparing and illustrating them. He took some pains to show the cost and work entailed in properly preparing and presenting an elaborate paper. He claimed that so far as his position was concerned, and he thought it held good in other trade journals, that the publishers did *not* interfere with the editor in his conduction of the journal, as had been claimed by some.

Dr. Louis Jack, of Philadelphia, read a paper entitled "What should be the Character and Policy of Dental Journalism," holding the standard very high and laying aside all connection with business houses, etc.

Dr. Wilber F. Litch, in discussing the paper, spoke of "dentistry for dentists,"

"truth for truth's sake." In speaking of the matter of expense of publishing a strictly independent and scientific journal, he referred to the *American Journal of Medical Science* as an example.

Dr. John B. Rich, referring to patents, took much the same ground that Dr. Ottolengui had, but went further, claiming that we have many good things now because of patents which otherwise we would not have had. He spoke of some one coming from California with a set of rubber dam clamps, which he could not or did not get patented, and claimed that they were lost to the profession because not patented. He said they were the best things of the kind he had ever seen.

When Dr. Merriam asked him for the man's name and what kind of clamps they were and what had become of them, etc., etc., Dr. Rich was unable to answer.

Dr. J. Morgan Howe, in discussing both Dr. Potter's and Dr. Jack's papers, said that "an able independent dental journal is published, men have put their hands into their pockets and *are* sustaining it." This was in answer to some insinuations that no "independent" journal could exist, and the further insinuation that as this had not been done, no such journal existed. It was of course understood that both Dr. Jack and Dr. Howe referred to the *International*.

Dr. S. E. Davenport said that "we owe it to our self-respect to go it alone since the Dental Trade Association was formed." He complimented the trade journals, especially the *Cosmos*, for what they had done, but claimed that especially since the forming of this Trade Association they were so hampered that the time had come when we should be emancipated, as it were, and "go it alone," to repeat his words.

Dr. James McManus made some general remarks on the papers, and narrated certain matters of fact in connection with a certain New England dental society which rather "riled" our good friend Dr. Ottolengui,

more because of its truthfulness than anything else. If I mistake not, the trouble was that the reports of the doings of this society had not been published quite in accordance with actual occurrences, and the journal so publishing was called to account somewhat by Dr. McManus.

The afternoon session adjourned for dinner, at which about fifty sat down. This was altogether informal but very pleasant.

At the evening session the first paper was by Dr. Holly Smith, of Baltimore, which was on "Professional Atmosphere and Morals," followed by one by Dr. J. Morgan Howe of New York, entitled "Secrets and Patents *versus* Professional Progress."

Dr. B. Smith's discourse was somewhat poetical, and very refined. He gave a beautiful portrayal of Americans as regarded by foreigners, and referred tersely to the present national crisis. He spoke of dentistry as a profession and as a most liberal one, of the sacred duties—first to the community and then to our professional brethren. He described how broad our scope is, conserving vitality, preserving health, and prolonging life. The unprofessional use of professional skill was dwelt on in his *finale*.

Dr. Howe's paper agitated the subject of secrets and patents, quacks and charlatans, against the sale of filling compounds, withholding of formulas, and stated that we really had no information from Dr. Black's investigations. Dr. Crouse and the word "fellowship" was objected to, saying that Dr. C. argues that it is not good for the professional man to know what he is using, at least he said that to the doctor in one of his letters. The practical way to get rid of secret compounds is to cease using them.

Touching upon the subject of dental parlors, he thought they had many rights under the present laws, but that they should be brought to relinquish their rights for the benefit of the community. The evil effects of patents he believes far exceed the good

done by their existence. Copyrights of books, etc., do no harm; in fact they are really beneficial. Dr. Crouse, he said further, was accountable for the statement that 90 per cent. of all dental patents were *invalid*, but Dr. Crouse nor any one else can deliver us from the *valid* patents as we should be delivered. The doctor was very strong in declaring himself against all members who take advantage of the profession by patenting.

Dr. St. John Roosa was the first of the medical profession, guests of the Institute, who were present, to open the discussion. He thought specialists should go hand in hand to a certain point, then separate. Dentistry has received much thought from him, and at one time he endeavored to secure the attachment of a dental department to one of the medical institutions in this city, but he was met with the argument that dentists did not live professional lives. He claimed that professional men must not have anything to do with patents.

Dr. Rich, of Washington, believes that nothing has assisted us and the States generally so much as our patent laws. "Who would go back to the days before patent medicines? before the dental-engine hand-piece and a host of other inventions all since *perfected* by other patents?" He regards the attitude against patents as a kind of professional dishonesty, and a curious piece of same which he does not understand. All persons should have the right of protection by patents.

Dr. McManus said he had paid to have patents suppressed, such as the old vulcanite, and he had not made a vulcanite plate then.

Dr. Merriam scored one very good point relative to the professional man being interested in a dental or medical commercial enterprise, by saying that when a professional man is called or his services are sought, he should be a free man, free to dispense, etc., and not bound by that in which he is interested.

Dr. Thumeray, as a patentee, said that if one takes out a patent that is not good for anything, there is no danger to the profession.

When final discussion had ceased, a resolution was offered by the Institute which deprecated the use of secret compounds, and advised the profession to discontinue same as it retarded the advancement of the professional standard. Also

Resolved, That all dentists be advised and entreated to support a certain dental journal that was not supported by the trade.

Dr. Holly Smith and Dr. Howe were then accorded the privilege of closing the discussions of the papers.

The New York State Society held its annual meeting at Albany, May 11 and 12.

An attempt was made to organize the Eastern Branch of the National Dental Association. Several whose names were on the roll, notably Drs. Walker and Northrop, of New York City, were absent. Apparently, the greatest interest was taken by one of our friends from New Jersey, who, with a few others, evidently expected to capture the offices.

Dr. Ottolengui opposed the formation on the ground that it was doing something for a sentiment which would militate against the society, and looked upon the matter as an endeavor to keep open sectional prejudices, which should not be; spoke of a compromise which was suggested that three sections meet each year and the National every fourth year as presumptions; National would then meet in one locality once in twelve years.

Dr. Rhein, of New York, supporting Dr. Ottolengui, moved to lay the matter on the table; which was lost.

Dr. Fillebrown, of Boston, deprecated these differences of opinion and suggested a unanimity of purpose.

Dr. E. A. Bogue, of New York, sustained Dr. Fillebrown in this position, and suggested waiting until the next meeting of

the National before taking further steps. After appointing a committee to formulate constitution and by-laws, the meeting adjourned to meet at Omaha, virtually accomplishing nothing but the discomfiture of certain politicians.

C. Le Grand Ames, of Albany, was elected president for the ensuing year, and John I. Hart, of New York City, as vice-president.

The Odontological meeting was preceded with the usual clinics in the afternoon, which, under the able supervision of Dr. Hudson, have been a great feature.

Dr. S. G. Perry was one of the clinicians, with Dr. Hudson as his patient. It marks a great advance to see these eminent gentlemen having one another as patients at public clinics.

Dr. V. H. Jackson demonstrated his wire method of making regulating appliances.

Dr. John H. Meyer, than whom there is no more proficient demonstrator of Continuous Gum in New York, gave a very complete illustration of his various methods.

In the evening Dr. S. H. Guilford, of Philadelphia, read a paper entitled "Physiology and Dynamics of Tooth Movement." It was almost a reproduction of Dr. Case's paper on the same subject as presented at Old Point Comfort last summer, and simply showed that Dr. Guilford, who at that time antagonized Dr. Case, now agrees with him, and would advocate what Dr. Case did. It brought out the old discussion of the lever question, but nothing material was developed.

"METROPOLITAN."

An Ointment for Chapped Hands.

Steffen (cited in the *Indépendance médicale* for March 23d) employs the following formula:

R.	Menthol.....	10 grains
	Salol	} each..... 22 grains
	Olive oil	
	Lanolin.....	675 grains
M.	S.: To be applied twice a day.	

SWAGING PLATES.

An article, having many good points, and well worthy the careful study, of those engaged in metal plate work, is found in May number *Ohio Dental Journal*, by Dr. H. S. Gibson; an abstract of which we present below.

MOULDING SAND AND ITS MANIPULATION.

"I have given the moulder's black loam, used by most brass founders, the preference over all the other materials, as it possesses the necessary properties of giving sharp, well defined dies: has the porosity for the escape of the steam, when pouring, and is comparatively clean. It is admitted that the other materials give to a certain extent the same results, with probably the exception of marble dust. I have tried most of them, however, and give black loam the preference.

An oil or glycerin mixed sand has the advantage of always being ready for use, but the dirt and odor connected with it can be just as well avoided.

By having a tight zinc-lined box prepared, our loam can always be kept moist, the moisture necessary being determined by experience alone, and by thus having sand always ready, it greatly overcomes the tendency of our metal to bubble when pouring; we can pour the metal at an exceeding high temperature, while if sand has to be prepared at a moment of casting, the temperature of our metal will have to be much lower, barely beyond the smelting point and bubbling is very frequent.

The sand should be well sifted before using, thereby mixing thoroughly and enabling us to remove all particles of metal from previous casting.

THE MODEL.

I prefer the tapping of the model to remove it, much more than removing by force. Let it come out of its own accord, as my dies are more perfect this way.

Of course a model falling too freely from the sand should be rejected. If this is carefully done good results will follow. A very important point to be observed in each step of the work, is to avoid haste. Haste does not give good results; an imperfect die will give trouble and bad results from the start to the finish.

The simple fact of plate fitting the model does not insure the fit in the mouth. A plate should always be tried in the mouth at each step, observing any change necessary, also change that may have occurred in the handling.

THE EFFECT OF OVERHEATING DIE METAL.

Zinc should be smelted over a slow fire, carefully avoiding overheating, as this has a tendency to make our dies brittle, an undesirable quality in a die.

AN EXACT PATTERN.

It seems a very small matter to get a pattern from which to cut the plate metal, but a little experience will prove otherwise. Economy in working the precious metals is extremely necessary, and the habit can be acquired easily. Having pattern exact saves not only material but time and produces better results.

ANNEAL FREQUENTLY.

Gold must be frequently annealed, heating to a cherry red and then plunging into water or dilute sulphuric acid. This renders metal soft and pliable and easy manipulated. 26 gauge is recommended for upper dentures, although the manner of attaching teeth and shape of the plate determine to a great extent the gauge we will use. In full rubber attachment a thinner gauge can be used than in full solder. Also in partial cases a heavier gauge is necessary, with the exception of lower partials, where we usually stiffen the plate, or swage two thin plates and unite with solder. In these cases 27 or 28 can be used.

In a rim plate, 26 gauge is not too heavy.

A great deal of the gold now for sale is

harsh and hard to adapt. It has a tendency to spring in swaging.

A soft gold of 19 karats fineness answers all the requirements. I prefer when I can to smelt and alloy my own plate, thereby getting exactly what I want.

A plate once sprung is very hard to bring back to its former shape. Always be sure to keep the metal free from particles of zinc and lead, which are liable to adhere to it from the dies, as when annealing, with these particles adhering to the plate, the fusing point will be lowered and a hole in the plate, at the place where the base metal adheres, will be the result.

I generally cover my dies with oil and also the counters, and carefully wipe the plate before placing in the flame.

STAMP ALUMINUM PLATES.

I believe it is better not to swage aluminum plates, but stamp them, and not use the mallet more than is necessary, but use a series of dies and counters, tapping together in the usual manner with a heavy hammer, and not with the hydraulic press, of which I shall speak further on.

The entire process should be gradual and gentle; forcing it suddenly is apt to fracture it, especially if annealed at too high a temperature. This will take longer to arrive at the result, but it justifies us to take the time. Aluminum should never have the force of the mallet direct upon it, a heavy piece of linen, or even rubber dam, should be laid on the metal and swagging conducted on this. The metal is extremely soft and easily indented, and presents a sorry appearance if we do not use this precaution.

USE OF THE PARKER SWAGER.

In lower partials I experience the most trouble; not in the swaging, but when I attempt to re-enforce the plate. Since the advent of the Parker shot apparatus, I find my trouble considerably less, since by the machine I can reduce plate to former state easily on the plaster model. This device I find indispensable in my laboratory.

It is claimed by the makers that one can swage a plate, directly on the plaster model. That it can be done I will admit, but at a great expense of time and labor that is really not necessary when we can use a quicker method easier. I generally cast one die and counter as usual and conform to this, then finish on the plaster model itself. By this means we have results not obtainable by any other method I know of.

The method of casting the die, when this device is to be used, is extremely simple, as we do not need an accurate die; all the undercuts on the model can be ignored—simply a die to strike plate to partially the shape desired. The shot, when plate is on the model, will force metal into all undercuts and give an even pressure to the plate.

So perfect does the apparatus do its work, that very often the only way I can separate the plate from the model is to cut the model away. This device, if used with a power-screw press, gives better results than can be obtained by the hammer, and with less danger of fracturing the model. In fact it approaches the hydraulic press in the manner of working, avoiding having to cast the special dies and counters which have to be used with it.

A plate on being warped can be restored to its former shape by this means, and even after the teeth have been attached to the plate, teeth and all can be swaged without fracturing the porcelain. Only when we do this a little more care is necessary. The warping of a plate is usually at its weakest point where the solder or whatever the mode of attachment is, does not protect it against bending, so that it is very easy to reduce the plate, and the pressure at this point will bend plate to the model. There are other ways of reducing a warped plate, but this is the simplest and most accurate."

The Georgia Dental Society will meet at Lithia Springs, June 7th.

GET GOOD IMPRESSIONS.

The two great essentials in plate work are to have a good impression and a correct articulation. It is well known that mouths soft and flabby are difficult to fit in a satisfactory way. Dr. Chupein, in *Dental Office and Laboratory*, says plaster is the wrong material to take impressions with in such cases, and his paper presents some interesting thoughts on this line. We give below an extract as follows:

"At one time I thought that plaster of Paris was the only material fit to take an impression of the mouth. I regarded it as the *sine qua non* for this purpose. So wedded was I to this material that Dr. Staples, of Texas, criticised me as "*An all plaster crank.*" My faith in plaster has not produced a total revolution by any means, but I must admit that in edentulous mouths, both upper and lower—especially the latter, modelling compound yields an impression, a model from which is vastly superior to an impression taken with plaster of Paris."

But in the use of modelling compound the case must suit the material. Wherever the mouth is at all flabby, the front part of the gum soft or flaccid, no adhesion can be obtained from a model of such a case when taken with plaster of Paris. These soft parts *must* be pressed by the plate, as they are pressed by the impression. In the lower jaw, too, we know that it is next to impossible to obtain an impression of the gum which lies next to the roots of the tongue, on account of the integuments which fill the mouth at these places.

* * * * *

To use modelling compound, the tray should be heated so that the material will adhere to it. The material should be made very soft in hot water. It should be worked in the hands while soft so as to deprive it of all adherent water. It should be laid into the tray smoothly, all creases, folds and ridges obliterated. It must be soft

throughout, with no lumpy or hard places. No more material should be placed into the tray than is just sufficient to take the impression; calculating this by the manner the tray fits the gum on which the material is to be pressed. Before inserting it into the mouth, the surface should be passed over the blaze of the spirit lamp so that it presents a glazed, semi-fluid, or semi-melted appearance. The material should be hot, but not hot enough to burn. This is best determined by placing the tray next your own cheek, when, if found too hot to be borne by your own cheek, it will be too hot to be borne by the patient.

In taking an impression of a lower gum, the tray is passed in sidewise, in such a way that the lips will not have to be pulled too violently to get the entire tray into the mouth. Once into the mouth the tray should be brought down steadily on the ridge of the jaw with the handle of the tray on a line with the center of the mouth. The position must not be changed. It is *held in place immovably* until the material hardens. The material should be so hard, before any attempt is made to remove it from the mouth, that any exuding portion of it will refuse to take an imprint from the finger-nail. When it is brought down on the edge of the jaw, as above described, should there be any idea that the cheek, or integument of the cheek, on either side, have folded beneath the material, the tray should be held firmly in place with the fingers of both hands—the operator standing on the right *and rather in front of the patient*, while the assistant passes his finger on each side, lifting these integuments away from under the material. This should be done *at once* before there is any chilling or hardening of the material. The material may also be pressed next the gum *at the roots of the tongue* should any exude beyond the tray; but as the tray is especially designed to take care of these parts, this will rarely be necessary. With this material

there will rarely be any of the folding of the integuments of the cheeks that we have spoken of. This folding is more apt to occur at these places with plaster impressions than with modelling compound impressions. When the impression is removed from the mouth it should be thoroughly hardened by pouring cold or iced water over it. In placing the material in the tray, any excess of it is best removed by snipping off with a pair of scissors.

In taking an impression of the upper gum, the same rule is used for this material as for plaster of Paris, namely, the back part of the tray, near the soft palate, is carried to place first and the forward part afterwards. The cup is held steadily and immovably in place with the fingers of the left hand pressing on the tray at the palatal vault as well as on the ridge in the region of the bicusps, while the fingers of the right hand lift the lips so as to permit the material to be pressed on the buccal parts of the ridge, as well as to exclude all air between the material and the gum. In this, as in the other, the material is permitted to get perfectly hard before removal, and is to be chilled as the other was. An impression of this material will adhere to the gum just as firmly as one of plaster of Paris, but this, though often, is not an invariable sign of a perfect impression. On removing the impression from the mouth, should any *streaks or ridges* be noticed on the impression in the neighborhood of the vault, such an impression may just as well be discarded, as a plate made from it will fail to adhere. The impression should be *smooth at all points*, indicating an even pressure of the material at all parts of the mouth.

When the mouth or gum is *firm at all points*, plaster of Paris is the material to be used. For partial impressions, also, nothing approaches plaster of Paris for correctness or reliability; and for crown or bridge work, plaster of Paris is the only material *par excellence* which yields certain results."

How to take an Impression in Cases of Fractured Jaws.

Dr. Dorrance, of Michigan, devised a scheme for taking the impression which seems to me very good. He always takes it with plaster, regardless of the position of the parts. After the model has set he saws it in two at the point or points of fracture. He then adjusts the pieces in the position which he thinks is correct and vulcanizes his rubber splint. By this method it is unnecessary to adjust the parts before an impression is taken.—*H. F. Hussey, Ind. Dental Journal.*

This scheme may be found in *Kingsley's Oral Deformities* and other standard works. It is the proper method of procedure to obtain a correct model upon which to vulcanize a splint. There are always certain marks of abrasion on the remaining teeth that will indicate the relation each jaw sustains to the other. This of course contemplates, that the fragments will be articulated to a model of the opposite jaw. In one instance in my practice the patient claimed to have lost one tooth knocked out in the accident, but the adjustment of the fragments proved most conclusively that though an incisor was missing he had lost it years before.

These models were preserved and still make an interesting study of the case.

ATKINSON.

A Solvent for Celluloid.

Liquefied celluloid makes an excellent microscopical cement. One can dissolve spoiled photographic (celluloid) films by cutting them into shreds and soaking them in alcohol. When swelled and grown soft, as gelatine does in cold water, add ether, and in a few minutes the liquid becomes fluid and of the consistency of mucilage. This cement can be applied to general as well as microscopic uses, but it must not be used too near the fire, for celluloid burns like gunpowder.—*C. A. Emory.—Ex.*

THE
American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription \$2.00 per year; \$1.00 for six months—including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, May 26, 1898.

Dentists in the Army.

There are so many good, sensible reasons which could be brought up, especially at this time, showing the actual necessity for such appointments, we doubt not if they were presented in the right way to the proper authorities some of them would surely command attention. That the condition of the teeth is considered vitally important in the fighting capacity of a soldier is shown by the attempted rigid examination of the mouth by the examining surgeons before enlistment and the many otherwise physically perfect specimens of manhood rejected for the imperfect condition of the oral cavity. That the healthy condition of the mouth at the time of enlistment cannot be maintained without continued care and attention by a person competent to look after such conditions, must be apparent to any one who will spend a few moments in careful thought on the subject.

That the enlistment examinations by the

Examining Surgeon must be to a great extent farcical and inaccurate as regards the teeth, must also be apparent to every thinking mind. Not being versed in this branch of the healing art, he can only base his conclusions on the general appearance of the dental apparatus, without a single scientific reason to justify his decision. In this way it must be that many are rejected who should be admitted and many are admitted who would certainly be rejected by a competent dental surgeon. This then being the case, that the presence of a dental surgeon shall be in every regiment is all the more apparent. In fact it may be stated that few rejections need be made from this standpoint, if dentists were present in every regiment to insure prompt and immediate attention to defective oral conditions. Indeed, many enlistments may be made under the present arrangement whose dental apparatus, though weak and susceptible to constant dangers of derangement, have heretofore been under the continual care of the family dentist and kept in a comparative perfect state of preservation, which when deprived of this constant and needful care, must of necessity soon crumble and break down, rendering the soldier entirely unfit for exposure or the coarse diet to which he must be subjected. The teeth are unlike the other organs of the human body; they cannot be hardened by rough use, exposure and neglect. The demand for such appointments will impress the minds of the authorities stronger and stronger, until it will most certainly engage their earnest attention from dire necessity. It cannot fail to come. Why it has not come sooner is owing entirely to our youthfulness as a profession. If this present war should last for a considerable length of time, it may almost be expected to see dentists enjoying this long looked-for distinction before the close.

The demand during the last war was not so great from the fact that the people had

not been so thoroughly educated to rely on the services of this much required individual, and of course to suffer, was their natural expectation, and they bore it with the same fortitude that they did the other hardships to which soldiers of the present day may not be subjected. The services of the family dentist will be as much missed by the volunteers of to-day, as will be the family physician, and the demands may be expected to come so strong from the tented fields as to engage earnest attention from headquarters.

What has become of the committee appointed by the Southern Branch of the National last February? They might be getting in some hard and telling work now before Congress closes, which it may do in the next thirty days.

H. H. JOHNSON.

Broaches.

A handle is not often necessary to a broach. In fact it can be manipulated better without one. The soft delicate touch to be had with the broach held between the fingers, is destroyed by a handle. Frequently for entering lower molar and bicuspid roots, the broach is found to be too long. With wire cutting forceps, cut the shank nearly all off leaving just sufficient to rotate the broach between the fingers. Handles are necessary when using canal cleaners with sulphuric acid, as this operation does not require that the broach should be rotated, but simply passed in and drawn out repeatedly. The handles that come with the Donaldson cleaner are admirably suited for the purpose. To remove a cleaner or broach from one of the handles, heat the broach slightly in a small flame; at the same time pull on the broach with pliers. To replace a broach in a handle, heat it in a small flame, holding with pliers; touch the heated shank end to a small piece of shellac, slightly melt the shellac and press into the handle, cool with a drop of water from the finger.

Joint State Meetings.

There have been, during the last few years, several joint State meetings, in different sections of the country. The plan has worked so well, that they are continued from year to year with increased interest. Would it not be a good thing for Georgia, South Carolina and North Carolina to have such a meeting? If not those States, Georgia, Alabama and Tennessee are well situated geographically.

Such meetings bring together new men with new life and new ideas. Get out of old ruts; find new channels, and it will be found that new life will be springing up; greater enthusiasm will prevail; greater good will result.

There is a class who are content to let things wag as they will, and just drift along. Such a class have to be carried on the shoulders of the progressive, as it were. We appeal to that progressive class to do something. Don't stagnate. Don't be satisfied to meet annually and have a few "papers" and some discussion. Open the veins and throw in new blood or there will be death from "heart-failure."

To the Georgia Society:

While the navy is defending, and winning victory for our country, let us not forget we owe our profession a love and devotion akin to that for our country. We can never conquer our enemy unless we are thoroughly organized. The State society, is where we camp for a season to recruit and start out afresh, encouraged by brotherly touch of heart and brain to battle for the success of our profession. Let us come together on the 7th of June as one man, with one purpose, stimulated by one desire, carrying with us everything that will add to the success of the meeting, and we will return to our offices refreshed by the consciousness of having done our duty. I beg every brother who reads this to make a sacrifice one time and meet with us, and help perpetuate this noble organization. *Come.*

H. D. WILSON.

Civil Service.

As I understand the principle of civil service it is the utilization of individual adaptiveness to continuous special work—a principle which has for so long time impressed its practicality upon private enterprise, as to have equally impressed its uselessness and inadvisability upon almost the entirety of public business!

This feature was so much more than hinted at in the AMERICAN DENTAL WEEKLY editorial on "Associate Work" (issue of May 5th, No. 34), that it has seemed to me proper that I should deviate from my beaten path of strictly professional contributions and lend what aid I might to the work of "Dental Civil Service Reform." That presidents of societies are a necessity goes as much without saying as that a queen bee is an essential to the welfare of the hive, and to the perpetuity of the present and future work of making honey; but what would be the result of the annual placing of some one of the workers in charge as queen bee? Would not the making of honey—both as to quantity, and even more, as to quality—be periodically diminished, and when the colony had given the queen beeship to pretty nearly every member, would it not be found to have "outlived its usefulness"? Those of us who have reached the "allotted span" look back upon a sad record as pertaining to dental societies and associations—a record which has finally degenerated into what are called "academies" and "institutes of stomatology." Is this any safe ground for more satisfactory prognosis? I think not. Experience seems to teach that there are varied essentials to the health, not to say anything of the life of a dental, as well as any other organization, and that the first is "workers" who shall do work for the love of it, and who shall bring to the hive good pabulum, such as will attract the attention of other workers, and such as it will be

worth while to so discuss as that its grade as pabulum may be eventually established. This is the first and greatest essential, and if an organization "outlives its usefulness" it is fair to assume that it lacked this essential.

J. FOSTER FLAGG.

(To be continued.)

Working for the Meeting.

The officers of the Louisiana State Dental Society are making strenuous efforts for the success of the joint meeting with the Southern Branch of the National Dental Association, which is to be held in New Orleans next February, and, judging from the extreme activity displayed by the members of the various committees, a grand success is sure to follow. Both bodies are devoted to the same grand cause, and many of the members of the Louisiana State Dental Society are also members of the National Association. In union there is strength, and in this temporary combination both organizations will find many material advantages that will be greatly beneficial to their individual interests, for the combined efforts of the various joint committees working as zealously as they have for the past few weeks, will certainly result in creating an unusual interest throughout the entire country, that will bring a greater attendance to the meeting of the Southern than she has had for some years past.

The Southern Branch of the National Dental Association acted very wisely, in promptly accepting the cordial offer of the Louisiana dentists to meet jointly with them, as it will be greatly assisted in its work, and will add materially to the success of the meeting, both in point of interest as well as that of attendance, and will undoubtedly add many new names to its membership roll.

New Orleans has many advantages over other Southern cities as a meeting place for organized bodies, especially at that time of

the year, owing to the many pleasant attractions of the Carnival festivities and reduced railroad rates which will be on at that time. And as the Louisiana State Dental Society is doing all in its power for the pleasant entertainment of its guests, and as the proverbial hospitality of the Crescent City is usually unexcelled, all those who attend will certainly be royally entertained.

In view of the above facts, it behooves every conscientious practitioner of the South who is interested in the welfare of the profession to lend a helping hand and assist in the good work by attending in person.

WALLACE WOOD, JR., D.D.S.

A New Clamp.

One of the drawbacks to the wearing of artificial lower teeth is that decay frequently makes its appearance around the tooth—generally a bicuspid—clamped by a band. If such teeth are efficiently filled they may last for an indefinite time, but it is often difficult to place a clamp on them which will hold the rubber dam sufficiently far down to excavate all the decay. To obviate this, Mr. Humby has lately described and shown a clamp which he claims as efficient for the purpose. It is a horseshoe shape, made of springy steel, and terminates in two sharp points. The points press into the cementum of the tooth on the buccal and lingual sides, the dam is slipped over the top of the clamp and tucked down beneath the points which hold it in its place. The top of the clamp can then be drawn forward to rest on the anterior teeth out of the operator's way.—*British Journal of Dental Science.*

To Make a Perfect-Fitting Post.

Sometimes it is desirable to fit a crown for a root which has become so badly decayed as to present the appearance of a funnel-shaped canal. An ordinary pin, as

they are supplied from stock, fits so loosely in such a canal that it makes it difficult to keep the crown firmly cemented. Dr. Ottolengui gives a method in *Items of Interest* which he thinks should probably be credited to Dr. Van Woert:

Trim a soft pine stick to fit the canal in the root. When it is approximately fitted it may be made a perfect fit by forcing the peg in with a twisting motion. The soft pine will readily adapt itself to the walls. This stick is then wrapped with very thin soft platinum and again forced into the root. The stick and platinum is now removed from the root, the platinum cone taken off the stick and made solid by filling in with scraps of gold or high-karat solder. When this is accomplished you will have a post which exactly fits the abnormally-enlarged root-canal, requiring a minimum amount of cement in the final adjustment.

H. H. J.

Civil Service.

The civil service idea of Dr. Flagg in this issue should attract attention of thinking men. The idea is carried out in the offices of secretary and treasurer in a dental society. If it is good there why is it not good for the presidency. We do not propose to anticipate Dr. Flagg in his next article but simply to back him up in his idea of civil service. If a man has proved a fitness for a place, why dislodge him simply to try some one else.

The Treatment of Boils.

Burlureaux (cited in the *Indépendance médicale* for March 23d) incises the furuncle, removes the core, and fills the cavity with a powder composed as follows:

R Quick lime,
Sodium carbonate, }equal parts.
Alum,

M. This is said to kill the pathogenic micrococci and produce rapid healing.—*New York Medical Journal.*

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., JUNE 2, 1898.

NO. 38.

NOTES FROM THE STATE OF WASHINGTON.

The meeting of the Washington State Society, held at Tacoma, on Monday, the 16th, and continuing through Tuesday and Wednesday, was a most instructive one, although there were not as many in attendance as there has been at some previous meetings. The majority of the old guard were there, however, and sociability and general good fellowship prevailed throughout the session. It seems impossible to impress on the minds of a great number of practitioners the benefit that can be obtained for themselves, even from a selfish standpoint. The clinical portion of the program was as clearly demonstrated as it was possible to do such things, and the character of the papers was above the average; showing a large amount of care in their preparation.

The State of Washington has for the last three years been going through the troubles incident upon the starting of a college within her boundaries, and the effect has been to disrupt the profession from one end of the State to the other. Last year it was thought that after the examiners from the N. A. of D. F. had finished their investigations and made their report, that all hands of us would be able to let bygones be bygones and all join together and make the session this year a virtual love feast. It seems, however, that the end is not yet, and charges and counter-charges are thicker than were Dewey's bullets at Manila, more's the pity.

After considerable thought on the situa-

tion, the more I am of the opinion that it is a pretty good thing for a practitioner to be located near a college for two reasons. First and best, is because he must keep up with the profession, or the boys from school will run him out; and second, if he has any desire to push along, the presence of a school affords him an opportunity, such as is impossible to be obtained in a community where there is no school.

Unfortunately, it is hinted that some of the strings of the faculty of the Tacoma college do not chord with each other, and there is discord in the family. If it were not for Dr. Eshelman's influence, I don't know but that the extra tension on some of the strings might cause an open rupture; as it is, however, there is nothing to indicate trouble, but the direction in which the straws turn.

The Pacific Coast Congress, and after that the National Association, are the topics of interest that the fraternity are writing to each other about at present. We are all going to the Pacific Coast any way, and to the National, if we can. With Dr. C. L. Goddard as president of the Western Section, we feel sure of a good time and much benefit; and Dr. Fillebrown—well, we don't personally know so much about him, and while no doubt, we should gain as much, if not more, in the East, yet somehow, it seems more like going among strangers and out in the world. Washington will be represented, however, some way, and with a representative of whom she will not be ashamed; we don't know who for sure at this time, but

we are confident that if he comes from this State there is nothing to fear as to his willingness and ability.

B. S. S.

MAKING GOLD CROWN FOR LOWER FRONT TEETH.

We cannot imagine a case where a gold crown is admissible for an upper front tooth, but for the lower, where it would not show, it may be used. To make such crowns Dr. Usher, in *Dental Cosmos*, says:

A model is secured of the tooth to be crowned, and of the adjoining tooth or teeth to be matched. A plain porcelain tooth, either plate or rubber, is selected, of the exact width and contour desired, but somewhat longer than the tooth to be crowned. The porcelain tooth is used to produce an intaglio die of metal, in the same manner as with the Hollingsworth facing. Proceed as follows: Take a small wooden pill box, about one and one-quarter inches in diameter, fill it with molding sand, level it off. Into this press the porcelain tooth, pins downward, stopping off any unnecessary undercuts with sand. If the die is to be made of fusible metal, such as Melotte's, a rubber ring can be used to form the walls, but if zinc, type, or Babbitt metal is to be used the ring should be of sheet asbestos fastened with a wire. The porcelain facing should be heated before the hot metal is poured upon it, or bubbles will form on the face of the die. This may be done by heating the head of a flask bolt, holding it in contact with the porcelain facing with one hand while the other holds the ladle in which the metal is being melted. The metal is then poured and a good die obtained. A pattern to cut the gold by is made from a thin paper card, of such shape that when bent around the tooth it will form one continuous piece with a slight margin for bending over the cutting-edge. The gold is then cut to pattern. The face of the crown is then swaged up in the die,

and the wings extending from each side of the face are bent around with pliers on the model to form the lingual surface, cutting away any surplus gold until proper conformity is obtained. The seam is then soldered, the cutting-edge formed and contoured by bending over the surplus at that point upon the lingual surface. The point of the crown is then soldered and stiffened at the same time by putting sufficient solder inside the crown and flowing it in such a manner as to form a solid strip or body across the cutting-edge about one-thirty-second of an inch in thickness. He uses porcelain teeth in molding dies as described, not only for the incisor and cuspid teeth, but also for the bicuspid and molars; and it will be readily seen that this system can be applied to every case where the Hollingsworth or any other system can be used, with the advantage in its favor that the facings and forms that can be selected from are almost unlimited. In general practice, however, it will be found that a variety of dies, consisting of about six forms of each of the incisor and cuspid teeth, will enable us to cover the usual requirements in crown-work.

Liquid Borax for Soldering.

The following useful item by Dr. J. T. Usher is from the *Dental Cosmos*. He says:

Use a saturated aqueous solution of borax, made by filling a bottle with water and dropping into it a lump of borax. This is allowed to boil on top of the vulcanizer or elsewhere, and the water will take up a certain amount of the borax, leaving the residue undissolved. An ounce of this solution will last a busy man about a year. In using it the piece to be soldered is simply moistened where the solder is wanted to flow, and the solder will run like a flash, much easier than when the borax powder is used.

The thoughtful man is not often heard.

LETTER FROM DR. FLAGG.

We steal, for publication, a part of a private letter from Dr. Flagg. If we catch his ire, who will save us? He says:

In reading over THE WEEKLY it seems to me that sufficient *texts* are provided each week for the ample and increasingly interesting and instructive filling of every new issue! and that makes me glad that (at my time of life!) I am not an editor. Take for instance Förberg on carbonized cotton. You can imagine that I, and many others, could take issue with a number of points therein, and yet *rejoice* with Förberg that his aid is given for bringing us *one step nearer* "natural cotton" as the *ideal vehicle* for placing and retaining, for many years, permanent antiseptic influence in the canals of roots of teeth.

Förberg has been using carbonized cotton for twelve years. I have been using natural cotton for thirty-five years. We each have a "record," and we are both *satisfied*. I am just now having a cotton examined that was sent me in a canal as I had put it thirty-three years ago (1865) and if it is pronounced by the University microscopist—or whoever examines it—as *thoroughly rotten*, it will be an exact contribution, so far as that is concerned! and if it is pronounced *perfect*, it will be a contribution—as far as it goes!

In your May 12th issue is a most admirable illustration of the kind of work that should be done, and given as food for the journals—in the "Setting Time of Plaster." It may be that I am not "posted" on prosthetics, but though I have used salt for hastening the setting of plaster for, well—about a couple of hundred years! I never knew *just* what proportion would best accomplish any *desired* result, and if it is something new to dentistry, it is a burning shame that we should have had it from a medical source and from gentlemen who have *lately* been "in the habit of using salt" for this purpose. What a text for an article

is that paragraph from Dr. Weller, his fifth paragraph: "The first essential point, etc., etc." No truly "plastic filler" could subscribe to any such statement, for he would *know better*.

Would you think it possible, if *your* dentine was *exquisitely sensitive*, to "couple kindness" with "sharp instruments" as the means for excavating? I wouldn't!

Yours with kind regards,

J. FOSTER FLAGG.

WHO IS THE DOGMATIST?

IN THE AMERICAN DENTAL WEEKLY, No. 35, there appears an article over the signature of J. A. C., in which Dr. Arrington is represented as propounding a pointed question to Dr. Pierce pertaining to pyorrhea.

If Dr. B. F. Arrington is the Arrington in question, then I disclaim having ever questioned Dr. Pierce concerning cause, beginning or treatment of pyorrhea.

Dr. Pierce is very positive in his declarations as to how pyorrhea begins, but I have never regarded him as *dogmatic* in his utterances on the subject, but have always regarded his advocacy of certain theory as to cause of the disease weak and untenable, especially so for a man of his attainments and experience as a practitioner and educator in dentistry, favored with most excellent opportunities for experimenting and testing for results to determine how far theory could be sustained by practice. Some of his first utterances concerning pyorrhea, some years ago, were that "pyorrhea alveolaris was pus in the sockets." Then the question to my mind was what produced the pus. There must be a cause, and where the cause is located must be determined. If at the apex of roots as the doctor asserts, then we must commence at that point and treat for cure. Likewise, if it commences in the gum tissue (always first perceptible at the gingival border) we must commence there and work for eradica-

tion and cure, and in my judgment, based upon experience and results, ninety-nine times in a hundred a cure will be more quickly and surely effected than to commence at the apex of roots.

The doctor asserts "emphatically" that "pyorrhea begins at the apex of the roots, and it is at the end of the root that true pyorrhea begins, without any disturbance at the gingival border, and the opening through the gum tissue is opposite the apical end of the root." If such be Dr. Pierce's convictions, established through observation and practice, the only reasonable conclusion to come to is that it must be a *peculiar type* of the disease (a freak) specially confined to the doctor's immediate locality, and it is to be hoped it may there continue until the type changes and the disease becomes as in other sections; then the doctor will view the subject differently, and will realize the non-disputable fact that to be successful in treatment we must begin at the necks of teeth and not at the apex of roots.

As there is no such thing as cure in a typical case of pyorrhea until deposits are thoroughly removed, and it is next to an impossibility to remove deposits effectually from apex of roots, the presumption is the doctor fails of success in effort to cure the disease, and always will as long as he thus locates the disease and insists upon constitutional treatment for cure.

A theory that will not hold good in practice and produce results desired is not worth advocating. I would not appear "dogmatical," but feel constrained to say the doctor must tack-ship and start upon another and more feasible *theory* before he can hope to have many followers or have much success in the treatment of pyorrhea.

In contradiction of Dr. Pierce's theory as to location and beginning of pyorrhea, I will state a feature in the disease familiar to many dentists and is proof convincing that true pyorrhea does not begin at the apex of roots, but at the gingival border.

When treatment (use of instruments and local application of remedies) is commenced at the necks of teeth and gingival border and pressed to terminus of deposits and waste of peridental membrane and process, the disease is checked and cure effected in a large percentage of cases, and years afterwards there has been no symptom of return of the disease, teeth firm in sockets and gums perfectly healthy.

Cerumal and sanguineous deposits occasionally found on the roots of teeth, should not be mistaken for nor confounded with true pyorrhea.

To get at and remove said deposits effectually, if possible, is all that is requisite for restoration of the soft tissues adjacent to a normal state. Not so in a case of true pyorrhea; the gums have to be treated properly or there is no cure.

B. F. ARRINGTON.

A Rapid Method of Sterilizing Instruments.

Dr. A. E. Wright (*Gaillard's Medical Journal*, *New York Medical Journal*), professor of pathology in the British Army Medical School, Netley, recommends for sterilization olive-oil heated to from 320 deg. to 356 deg. F. in place of boiling water. This method is more rapid and does not damage instruments or syringes. All that is requisite is to dip the instrument into the oil or to draw the oil up twice into a syringe. That the proper temperature of the oil is attained may be ascertained, in the absence of a thermometer, by dipping a piece of bread crumb into it, when it will be found to become brown and crisp. The olive-oil may be heated in a spoon over an alcohol lamp. If needles or syringes are sterilized in this manner before being put away it protects them from rust. This method of sterilization has been subjected to the severest laboratory tests, and absolute sterility has always been found.

Timbuctoo State Dental Society.**A SYNOPTICAL REPORT OF THE PRESIDENT'S ADDRESS.**

GENTLEMEN: You are to be congratulated that you are permitted to assemble once more to do honor to your beloved profession. I feel, very greatly, the honor you have conferred upon me. Be patient with me while I discharge the duties of this high office.

Our profession is the most noble of all the earth. Our mission is a divine one. We are wrapped in wonder, when we consider the grand strides made by the dental profession. We can see the monuments, the golden monuments, from afar. They have the sheen of the noonday sun. We have bridged the dark chasms with monuments to our glory, greater than the proud conqueror's triumphal arch. We have restored the beauty to the faded; we have made the old young. Verily, we have done wonders to behold. The whole world is ablaze with our glory. To the tombs of the ancients we reach back for our beginning in the high art. Down through the misty ages of time we have come, with our praises sung in every clime. How wonderful we are, and how wonderfully we have grown. There is not a man in the sound of my voice to-day who is not proud of our glorious monumental fame.

Man is wonderfully made, but he is not complete until we crown him and span him with our handiwork. Really, gentlemen, I can hardly do justice to the occasion. I feel myself inadequate to the task. You have gathered here from your labors to take counsel and to advise. Your wisdom will show forth in print long after you have gone to your merited reward. I cannot close without calling your attention to the wonderful improvements made within the last few years. The man from the hamlet, as well as from the city, is making a crowning success, and spanning the arches as the rainbow spans the heavens.

Thanking you for your patience, we will now have a paper by Dr. —, on "The Crowning Success of Professional Life."

CAVORTER.

Therapeutic Suggestion During Ordinary Sleep.

Dr. S. Herbert Britton (*Canadian Journal of Medicine and Surgery, New York Medical Journal*) says: I noticed not long ago that Mr. Flower seems to have no doubt, judging by an article of his in his magazine, that the time to educate children against bad habits, and in fact to carry on a great part of their instruction, is while they are *asleep*. This was a new idea to me, but I resolved to try it at my first opportunity. My little three-year-old daughter had, since an attack of whooping-cough, a most troublesome incontinence of urine. We gave her drugs, implored her, punished her, and did all we could to cure her; everything was useless. I had decided that time alone would cure her, but after reading Mr. Flower's article on the education of children during their sleep, I took courage. I talked to her during a quiet sleep, and suggested "— will not wet herself any more." I repeated this in her ear very distinctly, and said it over and over. I also suggested that she would not wet the bed any more. I told her how sorry her mamma and papa were when she did it, etc. Now, it must be remembered that this habit was so bad that the child was at no time in the day presentable when any one wanted to see her. Her mother was invariably compelled to see to her clothes before allowing her to see visitors. I was therefore very much astonished to notice soon after the first treatment that she did not repeat the soiling of her clothes. "But," I said, "it must be a coincidence," and let the matter drop for the time. The freedom from enuresis continued from day to day, and I, of course, continued my treatment at intervals, and must say that it is now over two weeks since she has been troubled in the least. Here was an instantaneous and complete cure.

He who has an idea and expresses it, is sure of attention.

REPLANTATION.

Dr. Barrett, in an editorial upon "Septic Conditions" in the April *Practitioner and Advertiser*, speaks as follows about abscesses which resist canal treatment :

"This extraction with a view to a subsequent replantation is not resorted to as often as it should be. If due care is taken, it is frequently the surest road to success. We have done it for the purpose of removing a small bit of broach that had unfortunately been broken off at the extreme foramenal end, and which there was no other means of reaching."

"With all due respect to Dr. Barrett, we decline to agree upon any such procedure in the premises. The teeth which can be replanted are those with single roots, and their apices are readily reached through the process, and diseased conditions can be broken up and drained, and even broaches removed, without the doubtful recourse to extraction and implantation. We have made—some fifteen years ago—a number of replantations, and the results were failures, usually in from one to four years, some, however, lasting longer. On the other hand, we have as a *dernier ressort* in these cases performed the operation of cutting through the tissues oftener than we replanted, with only one failure in curing the trouble during the last ten years. We incline to the belief that the majority of operators who have performed both of these operations will agree that in replantation, the tooth is soon lost with considerable absorption of process, and that this result does not follow in opening through the process to the apical territory. We will be glad to chronicle the experience of our readers upon this point."—*Ed. Western Den. Journal.*

These two brainy editors are a long way apart on this subject, it would seem, at a glance, and yet they are both right. Extraction should not be resorted to, to cure

an abscess, unless both canal treatment and alveolotomy had failed.

We do not believe that Dr. Barrett intended to convey the idea that he would resort to extraction and replantation before he had tried thoroughly the other methods. But extraction and replantation should be resorted to before the tooth is given up.

Recently we have cured four cases by alveolotomy that had for a long time resisted all other treatment: and if this treatment had failed, we surely would have tried replantation.

Contraindicants.

Doubtless all who use cataphoresis have seen cases where the patient is so susceptible to the electric current, aside from that of cocain, that to use it is torture. Even the slightest current is harmful. Such persons may be called contraindicants. The cause of this hypersensitiveness to the electric current is not rationally explicable, and can only be determined by test. To attempt cataphoresis in such cases is nothing short of torture. Dr. Low touches on this subject in the *Dental Cosmos* where he says there are two classes of people with whom it is useless to try cataphoresis for obtunding sensitive teeth; one class seems to be immune to cocain, the other one so sensitive to electricity that the remedy is worse than the sensitive tooth. In either of these classes he puts away his cataphoric apparatus and goes on with the necessary excavating, using hot air to lessen the suffering. His experience with cataphoresis has in the main been very satisfactory. He has taken out pulps without the least particle of pain. When excavating sensitive dentin he does not use cataphoresis for more than eight minutes, as he does not want complete anesthesia, as he would be liable to excavate too far.

It is said that Mr. R. S. Williams used to make one hundred and fifty varieties of gold.

“Setting Time of Plaster.”

That idea about a five per cent. solution of sodium chloride being the thing for the setting of plaster is an old chestnut. It has been known to the dental profession for many long years, and has been discarded, as its defects have been found to greatly outweigh its advantages. A five per cent. solution, which they regard as the best, imparts to the plaster when used for taking impressions a disagreeable salty taste, which may be avoided by the use of something else.

Again, plaster of Paris, when mixed with this solution, will in a short time soften, disintegrate, and become honeycombed, and a model made with this solution will soon break down and become useless.

A much better material for the purpose, and one which has none of the disagreeable qualities of the sodium chloride, is the sulphate of potash in solution with water. It can be used in any strength, and the stronger the solution the more quickly will the plaster set. This material imparts no unpleasant taste to the plaster, nor will the plaster mixed with it soften, either by long exposure to the air or by being put through the vulcanizing process.

I have found that a good way to use it is to keep two bottles of the solution on my laboratory shelf, one nearly a saturated solution, from which I use to make any weaker one that I may desire to use.

The other is the one used for impressions. Its strength is the result of experiments in mixing plaster. When the right strength is found a large bottle of that strength is prepared, and I can depend upon uniformity in its time of setting without any of that “guesswork” which so often causes embarrassing failures in taking impressions.

E. J. WAYE.

Sandusky, O.

The more a man knows, the less he desires to speak.

Crown-Setting with Gutta-Percha.

In an article on gutta-percha, Mr. Rush-ton, in *Brit. Jour. Dent. Science*, says:

“For cementing all-gold crowns, I have found a useful plan is to place some impression gutta-percha in the crown with a few drops of eucalyptus oil, heat and stir gently until some of the oil is driven off and a sticky, viscid mass is left. The crown is then pressed into place. Objection has been taken to the use of gutta-percha for this purpose, as the odor of the crown when removed is very unpleasant, but of this I have had no experience. I can only say that I have found that any stopping, after being in the mouth a long time, evolves an unpleasant odor when heated.”

He also gives this as an excellent formula for a gutta-percha filling:

Pure gutta	50 parts.
Finely levigated silica	30 “
Oxide of zinc	20 “

The Way the Powder for Oxyphosphate Cement is Made.

Pour strong nitric acid on oxide of zinc and stir until effervescence ceases; after a few hours, heat in porcelain crucible until red vapors cease, then raise to a white heat and cool gradually, allowing from six to ten hours. The crucible will require to be broken away from the hard stony mass inside, which, when pounded and very finely pulverized, constitutes cement powder. Mix this powder with syrupy phosphoric acid for use. No doubt finely powdered silica or other materials of the same nature are also added by various manufacturers.—*British Journal*.

Lithia Springs, the meeting place of the Georgia Dental Society, June 7, is one of the most celebrated and delightful resorts in the South. The curative properties of the water is known far and wide. If you wish to have a delightful outing go to Lithia Springs.

Treatment of Alveolar Abscess with Fistulous Opening.

When an abscess refuses to respond to such treatment as forcing creosote or other escharotic through the root and out at the fistulous opening, it means that there is necrosed bone at the seat of trouble. Until this is removed by some means or other there cannot be a cure. The *Items* gives Dr. T. M. Jameson's treatment, which, if well and thoroughly executed, ought to effect a cure in the most persistent case. Here it is:

"In the first place, fill root-canal. Locate abscess with a small probe or canal plugger. Dissect away the gum over the diseased bone, and with a round bur cut away all affected alveoli, and, if possible to reach the abscess, cut away a small portion of the apical end of the root. Wash out the cavity thoroughly with warm water to remove all debris. Inject peroxid hydrogen liberally until all signs of the presence of pus have disappeared, and pack the cavity with iodoform gauze.

"Adding two drops of the oil of cloves, mixed with vaseline, renders the iodoform nearly odorless.

"This treatment should be repeated every twenty-four hours until the pus cavity seems perfectly clean. This can be determined by the injection of peroxid hydrogen, when a final dressing can be left in the cavity, and it will heal without further treatment.

"I have a record of one hundred cases treated in this manner without a single failure."

The Dental Century is the name of a new monthly dental journal, edited and published by Wm. Gird Beecroft, D.D.S., Madison, Wis. Subscription one dollar per annum. We cordially welcome the newcomer. It presents a good appearance, and we surely wish it abundant success. There are not too many good dental journals. The Northwest especially, should sustain the *Century* well.

A Method of Strengthening Platinum Caps of Porcelain Crowns.

In constructing a cap for a root upon which you mount a porcelain crown, make it of very thin platinum to get a more accurate fit. This cap is afterwards strengthened by a solder composed of platinum and gold. For soldering the parts of the cap together, use a solder composed of forty parts of the platinum and sixty parts of gold. For strengthening the cap use a solder composed of twenty parts platinum and eighty parts gold, which is flowed on the sides and floor of the cap until the desired stiffness is attained. Both these solders will stand the heat of fusing Close body.—*W. B. Aines, Dental Review.*

Lamp Wick.

Be careful that the wick of your annealing lamp does not become charred. The round wicks for annealing lamps are usually too large; they will give a better blaze if two, three or more strands are drawn from them before placing them in the burner. Trim the wick each time the lamp is used for annealing purposes. Really, an annealing lamp should not be used for any other purpose whatever.

Exalgine in Dental Neuralgia.

Dr. F. C. Caley, of New Castle, reports the cure in a few minutes of severe dental neuralgia by means of a single dose of two grains of exalgine in an alcoholic solution. A drachm of rectified alcohol will dissolve twenty grains of exalgine, which latter is not precipitated by the addition of a small quantity of water.—*Clinique (Montreal), April.*

Dr. L. P. Haskell during August and September will be in Europe giving clinics. The school in Chicago will be closed during that time.

THE American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription \$2.00 per year; \$1.00 for six months—Including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited. The editor is not responsible for the opinions of contributors. Advertising rates sent on request.

Atlanta, June 2, 1898.

Dentists as Readers.

It has been a constant source of wonder to journalists, who by virtue of their position are better able to observe the fact than others, that dentists as a rule are such careless, slipshod readers and care so little for the literature of their profession. It is a fact, though it may be a lamentable one, that not one dentist in ten is a regular paid-up subscriber to any dental periodical. It is true a few sample copies during the year may stray into the office and they are probably read in a disjointed, unsystematic kind of way. But how any man who loves his profession and desires to keep along with its progress and development can be content with this meager amount of disjointed literature is beyond the conjecture of those who take a pride and delight in systematic reading.

The literature of the profession is hardly a less important factor in its development than any other element connected with it,

and yet it seems to be so much less appreciated. Where would the profession have been to-day had there been no journals to disseminate the valuable knowledge worked out by self-sacrificing minds and given without compensation to the world, that the profession might improve and grow in importance? These white-winged messengers now sail from clime to clime, carrying and bringing valuable stores of scientific lore—a veritable exchange of good things, nourishing to the eager and hungry mind.

A convincing proof of the value of journalism to the professional world was demonstrated a short time ago when the science of cataphoresis first came into practical use. In less than four months after Dr. Morton delivered his lectures before the New York societies, orders for cataphoric outfits were received by American houses from Japan. How did the knowledge of this wonderful development in the electrical science reach Japan? By the dental journals, of course. Had there been no journals in existence, how long would it have taken to disseminate the fact of these very important discoveries over the world? It could not have been done so thoroughly as it is in years. Dental literature (and by that, is meant largely journalism) goes hand in hand with the college, the society, the manufacturer and the other mediums of progress, and if anything, it is often in the lead of them all. Recognizing this fact, it seems that the profession would unite in all its might to uphold and maintain the few journals over the country, struggling for existence, to try to keep the profession above water now while it is being pressed down under the weight of the fast multiplying charlatans and parlors. It seems that if philanthropy cannot move, self-interest surely ought to do so. Can a man keep posted on the political situation of the day and read a daily paper once a week? It is just as impossible to keep posted in a profession by reading an occasional sample copy. Every

professional man who takes money for his services and does not give intelligent skill in return, when it can be procured so cheaply, is taking that which is not justly due him. Every man in the profession as a patriotic duty to the profession, should subscribe and pay for at least one dental periodical each year, and having subscribed for it, he should read it as a duty to his clientele.

H. H. JOHNSON.

Pulp Canal Drills.

Dr. Matteson says: When it is necessary to enlarge the nerve canal for the purpose of cleansing and treatment to and beyond the apical foramen he has been more than fairly successful in doing so by the use of flexible drills made of mandolin wire.

As these drills are not on the market, a description of his method of making them may not be amiss.

The wire is cut in suitable length wherein it is drawn taut and flattened to about one-half the original diameter. It is then removed and one end held in a pin vise and with a pair of pliers is twisted its entire length. The uniformity of the twist will be according to the skill. The flattening and twisting is accomplished without drawing the temper.

A section $\frac{3}{4}$ or $\frac{7}{8}$ of an inch is cut and soft-soldered into an engine bit having a socket drilled to receive it and is then sharpened.

These drills are sufficiently hard to cut dentine and are so flexible that they will follow an opening made with a Donaldson broach and will enlarge the canal sufficiently to admit a Gates-Glidden if desired. He has had them come unsoldered, but never had one break in a tooth.—*Dental Review*.

The Georgia Dental Society meets at Lithia Springs June 7.

Dental Civil Service Reform.

(Continued from page 459.)

The *second* essential for associate effort is one which becomes such, just in proportion to the numerical strength of the association, and the greater or lesser need for stimulating governance, for correct and ample "minutes," for funds and for correspondence.

For these an executive corps is needed, and it is essential that it should possess *ability* vastly more than *ambition for office*, and that, in its way, its members should be "workers" according to its demands.

This executive corps, consisting of president, treasurer, recording secretary, and corresponding secretary, is truly the *heart* of the organization. It must, in large degree, *make* the vital fluid circulate; it must be, in fact, an organization in itself; one that should be maintained intact in its efficiency, and therefore should be chosen with much deliberation and serious consideration. By these alone can such positions be rendered worthy of acceptance, and in this way only can their occupants be entitled to that distinction which many seem to regard as pertaining to the presidency alone, and with the belief that the evanescent annual placing of *somebody* in this prominent position *confers distinction* upon that fortunate incumbent!

The caliber of such as view this kind of elevation from such a standpoint, is accurately given in the editorial of No. 34 DENTAL WEEKLY, May 5th. *What could be expected* from such associates?

To this, probably more than to any other thing, is due that gradual decline which has been the history of so many of our dental societies.

That terms of office should be assigned the incumbents is a necessity, but that these should be made long rather than short, in as prompt degree as experience would render practicable, would seem to be indicated,

that thus not only continuous efficiency should be secured, but that an annual loss of time consumed in elections should be avoided.

Beside this, it would seem worth while to test the offering of an assured continuous interest to the officials, in view of the past experience, as it could not possibly result in less acceptable conditions and would, if a failure, eliminate one doubtful factor.

Furthermore, it would make tangible the great importance of having executive ability of decided merit in the positions of treasurer and secretaries and thus lessen the erroneous and invidiously distinctive importance generally attached to the presidential office, while showing that *distinction* is given to the position by the incumbent, rather than to the incumbent by the position.

J FOSTER FLAGG.

Hardened and Washable Articles of Plaster of Paris.

For the hardening of gypsum, a firm in Heidelberg has taken out a German patent on a process which apparently surpasses all those in existence, and furnishes very satisfactory results. Either burnt gypsum is prepared and mixed with the liquid named below, or else the finished articles of hot gypsum, or of mixtures of gypsum and other bodies are impregnated by painting with the fluid. The same consists of a solution of ammonium triborate in water. For this purpose, boracic acid is dissolved in warm water and a certain amount of ammonia is added, whereby a substance really soluble in water and deviating much in its properties from known compounds results. The saturation of the gypsum, or the painting of the plaster articles is carried out into the cold. The objects are subsequently rinsed off and dried. The surface becomes very hard after two days and insoluble in water, while the induration in the interior advances more slowly. By means of the

fluid described, gypsum floors can be hardened and rendered more durable and impervious to the influences of the weather. Saturating with ammonium borate is said to be especially useful on exterior walls of buildings, etc. Experiments have proved an antiseptic action of the liquid.—*Scientific American*.

Alkalinity and Mouth Wash.

Dr. Harlan in the *Dental Review*, says:

If the alkaline fluids preponderate in the mouth you do not need a mouth wash. Whenever the secretion from the salivary glands is slightly alkaline all the time you do not need a mouth wash, as the teeth will not decay, and the objection to any mouth wash containing formic or acetic acid is the exceedingly diluted solution of these acids, because you take one-tenth per cent. solution of acetic or formic acid, place it into a tooth and leave it for thirty days, it will leave a finely powdered surface over the whole, showing that it acts energetically on the inorganic material of the tooth. If you place a tooth in a forty per cent. solution of formic acid at the end of thirty days it would only be dull, not destroyed.

Impressions.

Do not use too much material when taking an impression. Select a cup to fit rather close, and put into it only enough material to cover the parts to be duplicated by the model.

There is no better way of taking a plaster impression than by first taking one in wax and enlarging it a little, except at the "heel," and then pouring in a small quantity of plaster and retaking the impression.

A sponge will absorb much, but will never give out anything until it is squeezed. Some of the most fragrant flowers impart their fragrance only when they are bruised.

The Effects of Tight Lacing.

Dr. W. E. Fitch (*Virginia Medical Semi-Monthly*, May 13th) arrives at the following conclusions:

1. The normal breathing of woman is like that of man, abdominal; tight lacing changes the type to costal.
2. The pelvic organs normally make a considerable excursion with each respiration. Tight lacing in the upright position checks this motion almost entirely.
3. Sitting or leaning forward lessens intra-abdominal pressure. Tight lacing in these positions greatly increases intra-abdominal pressure.
4. The uterus is displaced downward by tight lacing from an inch to two inches and a half. The pelvic floor is bulged downward and the circulation rendered sluggish.
5. Uterine development is greatest from the twelfth to the sixteenth year. Tight lacing is usually begun at this, the period of the beginning of uterine development.

Nerve Broach.

In speaking of nerve broaches, Dr. A. E. Matteson, in the *Dental Review*, says that he is not satisfied with any in the market. They are not as fine as he desires, and the finest are so weakened by the cut in making the barb that there is danger of leaving a portion in the canal to be heard from later. The ideal broach, to his mind, is made of (jeweler's) "extra fine swiss," annealed as soft as can be. They are then twisted as with the drills, and, being five-sided, form a screw which will entangle a nerve pulp or a fiber of cotton, which may be unscrewed and left in the canal if desired. He says, furthermore, that these broaches can be as thoroughly sterilized as any instrument.

Select the one for president who has made or will make the best president, and keep him there.

Filling for Deciduous Teeth.

Dr. Gilbert suggested the following a few years since, and it is well worth a trial. In filling deciduous teeth, he says, it is often impossible to exclude the moisture from the cavity sufficiently to prevent filling with zinc phosphate, unless the dam is used, which is not always easy by any means. The difficulty of filling may be overcome in the following manner: Place some cement powder upon a slab, also a little of the fluid, and beside these a little chloro-stopping (which is made by dissolving Dr. Gilbert's stopping in chloroform). Make a thin mix of the cement, then add to it the chloro-stopping, mixing in more of the powder until a thick putty-like consistency is obtained; now napkin mouth and dry as well as possible, immediately packing to place and finishing with burnishers.

Trial Plate.

Some one, somewhere, we don't remember, gave a good thing when he wrote about using tea caddy lead for trial plate. We caught on to that idea, as we do to a great many, and have used it with much satisfaction. Take tea caddy lead, which is thin, and form a trial plate on the model, using several layers of the lead, sticking one to the other with shellac varnish or liquid silex, which we prefer. It makes a trial plate that is rigid enough for all purposes.

The dental politicians will soon begin to stir and "slates" will be formed. It's a good idea to smash them.

Tripod of physical beauty is what the *New York Medical Journal* says respiration, circulation and digestion should be termed.

Wanted copies of *Catching's Compendium* for 1890 and 1891. Will exchange 1896 for them.

The Georgia Dental Society will meet at Lithia Springs June 7.

THE

American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., JUNE 9, 1898.

NO. 39.

URIC ACID—ITS PATHOLOGICAL AND THERAPEUTICAL RELATIONS GENERALLY CONSIDERED.

There are some who believe in the uric acid theory as cause of Rigg's disease. To throw some light on the subject, we make liberal extracts from an article in the *Atlantic Medical Weekly*, May 21, by Wm. A. Hillard, M.D., of Westerly, R. I.

While realizing that the field of uric acid in its relation to disease is large, we must admit that our knowledge concerning it is rather limited.

The theory of Dr. Alexander Haig, concerning the part played by uric acid in the causation of disease, is evidently well founded. Throwing some light, as it does, on the causation of disease, it naturally is suggestive of a rational treatment and above all it teaches us prevention.

As regards the so-called "uric acid diathesis" there is reasonable evidence to show that it does not exist. A man taking arsenic in such doses as to show poisoning symptoms would not be said to have an "arsenic diathesis;" and a man who is taking uric acid in his food in such quantities as to keep up a general poisoning effect, so to speak, should not be said to have a "uric acid diathesis."

Uric acid is formed in the body as a waste product, being the result of the oxidation of the body tissues, and is thrown off or excreted in the urine, principally in the form of urates—which urates are the com-

pounds of uric acid with bases, generally of the alkaline metals. The ratio of formation of one part uric acid to thirty-five or forty parts of urea is pretty nearly constant, as has been proved by Haig and other experimenters. In some conditions where we find the formation of urea in excess of the normal amount, there too do we find a corresponding increase in the uric acid formation, but otherwise without denying the possibility, there is no proof so show that uric acid is ever formed in the body in excessive amounts. The amount in the body is increased either from the direct addition from without, as in food and drink, of uric acid itself, or similar substances such as belong to the Xanthin group, or to a failure wholly or in part of excretion whereby the acid is locked up in the system.

Uric acid, as we have just seen, is made in the body in the proportion of one part of the acid to thirty-five parts of urea. Now allowing that a man makes and excretes three and one-half grains urea daily per pound of weight, the amount made in the body can readily be found. If now we find that the excretion contains more acid than was made, the question may be asked where did it come from, and the only answer to be given is that it was either introduced in the food already formed, or was dissolved out of the body, where it had been stored.

Uric acid passing into the blood soon after its ingestion in food is excreted by the kidneys in a relatively short time, providing the blood is in such a condition as to hold it in solution until excreted. As a matter of fact, the excretory organs hardly

ever succeed in carrying off all of the uric acid, because by the addition of this same acid in the food the alkalinity of the blood is lowered and a greater or less amount is deposited in the tissues of the body, especially about the joints and in the liver and spleen. Thus there is formed a store-house for the acid which may be liberated when the blood is in a proper condition. The key to the situation rests upon the degree of alkalinity of the blood. A normally alkaline blood tends to hold the acid and its compounds in solution and carry them to the kidneys where they may be thrown off. A blood diminished in alkalinity will deposit the urates in the body. A blood increased in alkalinity will dissolve and take to itself the urates and acid faster than they can be eliminated and then do we have the results of a flood of uric acid, evidenced by headache, mental depression, slow pulse of high tension, cold surface and extremities, oftentimes covered with a moist, clammy skin, and a scanty urine of high color and gravity.

Examination shows that as long as uric acid bears a relatively approximate ratio of one to urea thirty-five, in the urine excreted, no bad results are seen. As soon as the ratio rises to one to twenty, for example, the headache and other effects are noted. Now take for example a headache caused by uric acid and we shall find that the ratio of acid to urea excreted is larger than 1-35 and may even approach 1-16. Now, as before seen, the excess is not from formation, but from direct addition from without or from retention. A headache, therefore, may be present when the full quota of a man's acid formation is being eliminated, if the ratio of 1-35 is unbalanced.

From the condition of the urine one can gain an idea of the condition of the blood in its relation to uric acid. The production of urea being known, the amount of uric acid formed in the system can be readily found.

Fluctuations in the acidity of the urine occur from time to time with the fluctuations in the alkalinity of the blood. Again, the excretion of uric acid is inversely to the acidity of the urine. We find that the excretion of acid is larger during the so-called "alkaline tide" which occurs during the morning hours.

The excess in the urine is the overflow of an excess in the blood. We find that uric acid bears a relation to the quantity of urine and the rule governing it is that the quantity of urine varies from time to time inversely with the excretion of uric acid. This is also true of other body secretions and excretions, which all tends to strengthen our belief that uric acid exercises a powerful influence over the whole body. During the working day we find the acidity of the urine low, and as a result uric acid is high and water low. During the night the acidity rises, uric acid falls and the water is increased. In this way we can explain why the diseases depending upon uric acid in the blood are made worse in the morning. Also do we find that in rheumatic affections the pain and discomfort are worse during the night and the evening preceding, because the blood has deposited its excess of uric acid in the tissues. We also find that the warm months of the year correspond to the morning hours, and that the excretion of uric acid is increased, over what the excretion is in the cooler months.

Clearing the blood of uric acid increases metabolism throughout the body and stimulates the formation and excretion of urea.

Anything which disturbs this excretion will tend to produce, in a greater or less degree, the symptoms of uricacidæmia. A physiologic process like menstruation may cause such a change in the excretion of uric acid that the symptoms of uricacidæmia and diminished metabolism will prevail. Thus we can explain the relation of menstruation to the accustomed headache and depression experienced at such times. In a

normal pregnancy "we have a steady upward progression of nutrition and metabolism," and the blood during this time is free from uric acid. During this time our patient is not as likely to be attacked by an acute disease. But if this condition be altered, as by persistent vomiting, metabolism is at once changed and our patient suffers in consequence.

In a word, the effect of uric acid can be summed up as "arterial tension." By observation it has been found that uric acid circulating in the blood causes a contraction of the arterioles and capillaries over the whole body. Now, if it produces such results in the blood vessels, must it not influence the body as a whole and the several organs separately? We find also that there is a poor circulation and incomplete interchange between the blood and the body tissues in the circulation beyond. Thus we can explain the scanty urine, diminished secretions, and the other phenomena noted when uric acid is high. According to Haig, all diseases which are caused by uric acid, except rheumatism and gout, "are due to its effects on arterial tension and the interstitial circulation in the organs and tissues throughout the body." As an illustration of this claim, the transition from the uric acid headache to albuminuria and chronic Bright's disease may be mentioned. The change to albuminuria is one of degree only. At first the contracted arteries cause but a momentary disturbance in the kidneys; but when the attacks of arterial contraction have occurred frequently enough and with enough severity for a long time, the circulation is altered, and with this there commences a degeneration of the kidney tissue, and we find our patient suffering from chronic Bright's disease. In like manner other disease processes are allowed to develop insidiously.

Certain disease processes, by affecting the degree of alkalinity of the blood, may cure and again cause the symptoms of uricacidæmia. An inflammatory action, such as

fever, will drive the uric acid from the blood into the tissues and will by so doing lower arterial tension. When the fever falls, the blood, becoming more alkaline, is flooded with the acid previously stored, and uricacidæmia prevails. On the other hand, a disease such as Bright's disease, dyspepsia or marasmus, will increase the alkalinity of the blood, and so bring on uricacidæmia.

It is necessary to keep the oxygenating power of the blood normal, for deficient oxidation of the body lowers the acidity of the urine and increases the alkalinity of the blood, whereby the blood is flooded with uric acid, if there is any stored in the body, and the symptoms of uricacidæmia develop—witness the headache after being in a closely confined place where the air has become vitiated, as in a theater.

We have already noted that uric acid bears a nearly constant ratio to urea as regards formation in the body, and that there is almost never an increased formation of acid. The diseases which depend upon uric acid and its compounds depend therefore more on introduction from without and upon defective excretion. So it may be seen that we can prevent, and tend to cure, the diseases dependent upon the acid by controlling the amount of the acid in the system, and this may be accomplished by attention to diet and the degree of alkalinity of the blood.

Attention to diet is of the utmost importance. Chemical analysis shows us that ordinary beef steak contains 1.3 grains uric acid per pound, beef juice 49 grains, and beef extract 63 grains; and so it may be readily seen that the administration of an animal diet adds uric acid at once to the system, and as it diminishes the alkalinity of the blood it also diminishes excretion, whereas a diet composed largely of vegetables will increase this alkalinity and at the same time diminish the acidity of the urine, and so aid excretion. On this point Dr. Haig says: "I think we may conclude that it is possible, by avoiding entirely all animal foods that contain

xanthin compounds of uric acid, and also tea, coffee and cocoa—whose alkaloids are similar xanthin compounds—to limit very greatly the introduction of uric acid into the body, and when the stores and accumulations already in the body have been eliminated, to keep the excretion of uric acid in the urine always below the relation to urea of one to thirty, and that when this has been done all functional disease due to excess of uric acid in the body and blood will diminish and disappear."

In the matter of treatment by altering the diet we must be careful to supply nitrogen enough to the system in order that the quantity of urea may not fall below three and one-half grains per pound of body weight; and as we cut out animal foods in large measure we must put in their place other foods containing albumen. This change can readily be brought about without diminishing one's strength, nutrition or urea excreted. As a result of this change of diet, we find that the purely functional diseases are the first and easiest to be relieved or cured, such as headache, depression, and the like, while those diseases in which there have been organic changes are later benefited. As evidence that those diseases which depend upon structural change in part, or which cause structural change, are affected by this treatment, may be mentioned the condition of the joints of a gouty subject after death. The cartilages and fibrous tissues about the joints are found to contain erosions which were left when the accumulated acid had been dissolved out and eliminated from the body.

Disorders due to an excess of uric acid in the blood and body may be treated in a rather imperfect way by the administration of drugs. If the disorder be due to an excess of acid circulating in the blood, we have two measures at our command. We can clear the blood by administering drugs which will increase the excretion of the acid, or we may drive the acid from the blood

into the system as a temporary measure only. Thus drugs such as sodium salicylate, sodium phosphate, quinine, belladonna and salol will increase excretion, and drugs such as opium, calomel and other mercurials, acids and the iodides, which diminish the alkalinity of the blood, will cause the acid to be deposited in the system, and, by lowering arterial tension, will tend to improve the circulation throughout the body. The driving of the acid from the blood into the body tissues is often accompanied by pricking and sudden pains in the joints into which it is driven. Here it may be noted that after the administration of opium, whereby the blood is cleared temporarily of uric acid, there is a "rebound," so to speak, when the blood is again flooded, and headache and depression result. This rebound can be prevented by the use of the salicylates after the opium, whereby the uric acid excretion is hastened. The alkalies will dissolve the acid out of the system by increasing the alkalinity of the blood. The salicylates are poor solvents of uric acid if the blood is highly alkaline and acidity of urine low, therefore the alkaline salts should not be combined with them. As a rule acids aid and alkalies hinder the action of the salicylates. In the use of salicylates I would suggest the use of the strontium salt, which is highly recommended on account of its freedom from ill effects upon the stomach. The pain and temperature of a patient with rheumatism may be relieved by a salicylate which dissolves and eliminates the acid, but if the action of the salicylate is prevented the pain is increased.

Lithia is thrust upon us on every side as a solvent of uric acid, and such a solvent it surely is when outside of the body and in the laboratory. But lithia taken by mouth is not a solvent of uric acid, for, according to Haig, it "forms a nearly insolvent triple phosphate with phosphate of soda, or with the triple phosphate of ammonia and soda, salts generally present in animal fluids."

A careful study of this subject, it seems to me, will repay any physician; and if the theories and deductions of Dr. Haig hold good, then uric acid must exert an influence over the workings of the body as a whole, and the several organs separately, greater than we may now suspect.

The methods of examination for, and quantitative estimates of, uric acid are, as a whole, complicated and unreliable. A new method, chemically the same as Haycraft's, has been proposed by Cook, of Ohio, and seems to be worthy of trial. The details of procedure may be found in the *Medical Record* of March 12, 1898, page 373.

Abscess Evacuator.

Here is a simple little cupping arrangement suggested by Dr. T. H. Hunter several years ago. It is useful and simple:

Take one of Wood's patented polishing cups and plug the mandrel-hole with a piece of gutta-percha, which must not project on the inside of the cup. Then wet the inside of the cup and place it over the gum so as to cover the opening into the abscess. Gently press the cup flat upon the gum, and upon removing the finger the elasticity of the cup will cause sufficient suction to fill the cup with the contents of the abscess; repeated action will evacuate it. Medicaments placed in the tooth cavity may likewise be drawn through the sinus.

To Preserve Rubber Articles.

A cycling paper states that the occasional soaking of rubber articles in a 3 per cent. solution of carbolic acid will prevent the rubber from becoming rotten. It might be worth trying this suggestion on rubber sprays, etc., things which we may not often use, and the rubber of which, in the meantime, frequently perishes.—*Dental Record*.

The ductile man should always be insulated.

METHOD OF BRIDGE-WORK.

BY J. B. SNYDER, D.D.S.,

Bryan, Ohio.

Self-cleansing spaces, so-called, are a delusion and a snare. The method about to be described seems to be free from that serious and fatal defect. It is applicable more particularly to the molar and bicuspid region.

Gold or other crowns are adapted to the abutment teeth, and a plaster impression is taken with the crowns in place. Fill impression with plaster and sand or Teague's compound. A strip of platinum is burnished to accurately fit the space between the crowns. The cast covered by foil should be scraped somewhat. Foil can be held in place by applying a little dammar varnish to cast. Diatoric teeth to fill the space are fitted with gold tubes; the tubes are made of sufficient length, and the teeth are driven in with a wooden mallet, the buccal aspect being cut away so as to expose but little metal at cervical border.

The teeth with tubes attached are now ready to be ground to fit the foil. Should the tubes be too short on the palatal side a little foil can be burnished to fill up the space.

After the teeth are all carefully ground to place, unite crowns, tubes and foil with hard wax; then remove porcelains and invest, using plenty of 20k solder. After finishing, cement porcelains to place. Leave no sharp places to cut and irritate the gum, as the fixture when placed will sink into that tissue the depth the cast has been trimmed. Some of the advantages that might be enumerated are, that there are no spaces for food to lodge in and under, an advantage worth considering, judging from the nauseous and foul-smelling bridge cases we are called upon to remedy, that the porcelains are not subjected to the heat of the blow-pipe, that repairing a bridge of

this description is a sinecure in case of a broken porcelain, a very improbable thing, no breaks having occurred in any case, a new one can be cemented to place in the mouth, and that economy of precious metal had been used.

After using the above system for nearly two years it seems the cleanest, most artistic, most economical and altogether the most satisfactory method the writer is acquainted with.—*Ohio Dental Journal*.

Preparation and Application of Nerve Paste.

The following is said by Dr. Withold Linderman to be an excellent nerve paste:

With Kirk's arsenious paste (with a slight modification) one may prepare an excellent quality, by extremely finely triturating, in a porcelain mortar, arsenious acid (two parts), which is difficult to pulverize, with one part of pumice and a little carbolic acid, in such a manner that even with a 150-magnifying power no arsenic crystals can be distinguished; thereupon are triturated with the mass, two parts of cocain and one part of menthol; other additions are superfluous. A very small quantity of this paste is laid upon a pellet of cotton the size of a pin's head, and this plug is applied directly upon the exposed pulp. A temporary closure of the crown-cavity with sandarac or mastic solution, however, requires a little knack.

In order to avoid the inclosure of the paste and prevention of its action by the resinous solution, the cotton soaked with the resin should never be laid directly upon the arsenious paste; the two plugs should always be kept separate by means of a pledget of cotton moistened with water. The action of the arsenic will then be undisturbed, and the hardened resin will not exercise any pressure upon the pulp. At the expiration of twenty-four hours the pulp, in most cases, will be so void of sensibility that it can be partly removed; otherwise, the cauterization should be repeated.

Brass Crowns.

Hurrah for the Indiana Dental Examining Board! The *Indiana Dental Journal* gives the following instances where the law was enforced to good effect. Wonder where the two scalawags will next turn up?

Dr. (?) Todd, styling himself "The King of Dentists," who practiced for a season in the flourishing town of Woodburn (pop. 100), and who, the people said, put on brass crowns instead of gold crowns, was arrested for practicing without a license or having one legally recorded, and fined \$20 and costs. He boarded it out in jail. There were four other indictments against him, but on the promise that he would leave the State he was released.

Dr. A. J. Ferner, of Portland, Ind., a graduate of the Columbian Dental College, of Chicago, applied for a registration certificate and was refused because the college from which he was graduated is not recognized by the board. He was offered a permit to practice until the board met, on condition that he would appear before them for examination. This he refused to do. He continued to practice in violation of the law until legal proceedings were instituted against him, and then applied for a permit. As he admitted before witnesses that he had no intention of coming up for examination, the board refused him a permit and the suit was tried. Mr. Ferner was fined \$20 and costs. He talked of making an appeal to the Supreme Court, but we are informed that he has sold his office and will leave the State.

To Test for Genuineness of Ivory.

It is said that if concentrated sulphuric acid is applied to vegetable ivory it will cause a pink coloring to appear in about ten minutes, which can be removed by washing with water. The same applied to genuine ivory will not affect it at all.

Filling Children's Teeth with Tin.

In writing on this subject in the *Ohio Dental Journal*, Dr. Ambler says that he has for forty years filled children's front teeth with tin. He says:

"Up to the age of fourteen we find many teeth which are imperfect in structure. In such cases we advise tin, for as the patient advances in years the tooth usually becomes better, so that if desirable the fillings can be removed, and saving operations made with gold. By treating cases in this manner very little, if any, tooth structure is lost.

In filling the anterior teeth, we suppose the cavities have been taken before they involve the incisive edge, but if the edge is involved the tin should only be rounded out, no attempt being made to restore a corner.

Tin has physical properties which render it desirable as a filling material; it is about one-fourth as tenacious and malleable as gold. On account of its pliability it is easily adapted to the walls and margins, and a perfect fit is made, thus preventing capillary action and preventing further caries. Of all the metals used for filling, it is the best tooth-preserver and the most compatible with tooth-substance, and it does not change form after being packed into a cavity. Tin possesses antiseptic properties, which do not pertain to gold, for arresting caries in imperfect teeth, and owing to its therapeutic quality, and being a rather poor conductor, there is a strong probability of calcification taking place under it.

In a few cases tin does not discolor; in others it presents a grayish appearance, but in the majority it is more or less blackened on the surface, the metallic oxid penetrating the dentine slightly and acting as a protection, because it is insoluble, but in either event the tooth is preserved.

Are you making preparation to go to Omaha? The meeting of the National will be held there in August. The exposition will be in full blast.

Pulpitis—To Relieve.

Some time ago Dr. C. Keyes, of Brazil, gave the following as excellent for pulpitis:

"For allaying inflammation in the pulp, extending to suppuration, with or without pain, nothing is more effective than thymol, which is applied pulverized in a tin disk inverted over exposure and cavity filled with temporary stopping, having previously cleaned the cavity and washed with warm water. If pain be very severe, a drop of chloroform placed in the cavity, after the disk with thymol is adjusted and previous to putting in temporary stopping, will usually lessen pain; otherwise thymol generally requires from ten to fifteen minutes to produce effect. In slight cases one application is usually sufficient, but in severe ones sometimes several are necessary before arsenic may be applied."

A Thin Pulp Protection.

For this delicate operation Dr. G. F. Cheney performs it as follows:

Make a thin solution of sandarac in alcohol, rubber-dam adjusted, the cavity properly dried; a small pellet of cotton is dipped in the varnish, conveyed to the cavity, touching the bottom and walls. Five or ten minutes should be allowed for hardening, which can be hastened by hot air. In some cases take a piece of tissue paper, dip in the varnish and place over the cavity bottom.

In approximal cavities of the posterior teeth, especially those extending below the gum margin in close proximity to the pulp, with barely depth enough for anchorage to the filling, nothing else will take the place of varnish. Oxysulphate of zinc is highly recommended for the same purpose.

Man's failures are of more benefit to him than his successes. The one reverses the current and starts anew thoughts and renewed action. The other glides into an indifferent ease, and rests upon a glory that will decay.

Cataphoresis in Dental Surgery.

Dr. Arthur Holbrook, of Milwaukee, presents the following practical suggestion on the use of cocain in cataphoresis in dental operations: It is impossible to secure any degree of uniform success without an intelligent understanding of the properties of the reagent, particularly as to its solubility, stability and electrolytic reaction. For local anesthesia cocain has given by far the best results, but has also yielded many failures, owing to the difficulty of maintaining a stable solution, or of securing a pure, accurately-measured and readily-soluble form of the drug. Fresh solutions prepared from a known weight of cocain are alone permissible, and are best made at the time of application. I have used crystals and tablets from nearly every prominent establishment in this country, but for the past six months have relied upon Schieffelin & Co.'s cocain discoids, which are pronounced, without hesitancy, superior for dental purposes to any other preparation with which I am familiar. Discoids dissolve at once, give an exact dosage, are free from extraneous matter, and in an extended experience have proven invariably reliable.

Tooth-Washes as the Cause of Erosion.

In a paper presented to the Odontological Society of Chicago Dr. A. W. Harlan says:

"Most of the erosions that we have on teeth, if not begun by the use of these feeble, diluted acid lotions and washes, are carried along by the injudicious and too frequent use of tooth-brushes, tooth-rubbers, tooth-pastes, and powders containing ingredients that are not soluble in the fluids of the mouth or in water. Half of the ridges and grooves, and even disfigured faces of teeth that we see, are brought about through these means."—*International Dental Journal*.

After the dam is applied to the upper teeth, place a napkin across the mouth.

Taking Modeling Compound Impressions.

Several years ago Dr. Fay, of Buffalo, gave the following method for taking compound impressions, which is worth repeating:

Having selected a cup with straight sides, about one-fourth of an inch larger than the arch, soften the compound in boiling water, roll it into a ball, place in the center of the cup, and work it to the edge. If the arch be high, care must be taken to leave it high in the center and the surface free from wrinkles. Turn it over and dash some cold water on the back, then quickly pass the surface of the compound over the flame of a Bunsen burner. The water chills the back so as to give the compound a body, while the dry heat softens the surface, and a very sharp impression can be obtained with all the lines well defined. Place the cup in position, posterior end up first, raise the lip and press it upon the gums, and that which has run out the back also press in on the cheeks and lip from the outside. Allow it to remain until it fails to respond to pressure of the finger-nail, remove and cool, allowing it to remain in water until you are ready to pour it. Place pins in the cavities. If this method be followed out, it will be found that modeling compound is not the poor material some have branded it. If the compound be simply heaped up in a cup and shoved into place, as some do, you cannot expect the plate to fit; for the simple working of it in the hands cools the surface, and it would be impossible to get a sharp impression.

Clean Flasks.

In vulcanizing put a coil of sheet zinc into the water in the vulcanizer and it will prevent the formation of much of the black oxide which is found on iron flasks. After the zinc has been used three or four times the flasks will soil the fingers but very little when handled.—*Western Dental Journal*.

THE
American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription \$2.00 per year; \$1.00 for six months—Including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited. The editor is not responsible for the opinions of contributors. Advertising rates sent on request.

Atlanta, June 9, 1898.

Do Not Become Discontented.

There is a perceptible restlessness among the profession all over the country in consequence of the stagnation in business and the increase in competition. This state of affairs should have been looked for in a philosophical way, as a natural outcome of a declaration of war following close on to a money panic which this country has felt for five years. It would be useless and unfruitful to discuss the cause of the stringent times or the necessity which has arisen for declaring for war. They are both upon us and we must meet them bravely, unflinchingly. If practice becomes dull and money not so plentiful as we have been accustomed to have it, let us look upon it as a natural outcome of the unfortunate but unavoidable circumstances in which we are reluctantly placed and try to cut our expenses by leaving off the luxuries and being content with the necessities of life. These sacrifices are not pleasant, but viewing war as a necessity to maintain the dignity and honor of a great nation, and to

assist and relieve a suffering and oppressed people, let us make them cheerfully and view it as a part of our contribution to the cause. While the flower of the young, noble manhood of the country is volunteering to bear hardships they are unaccustomed to and risk health, life and limb for the cause in which they are enlisted, let us not forget that what honors or benefits may come to us as a result of this conflict, will be ours as much as any one's, and we must bear our part of the burdens of the cause. Then again, what one section is experiencing, is taking place all over this great cotton belt of the country. There is no use to grow restless, desperate or despondent and commit rash acts, sell out and move around, looking for a place that will bring back past luxurious incomes. The grass looks green, fresh and plentiful in the far off valley, but when we get there we find that it was the distant view which lent the enchantment.

If times grow hard and sacrifices have to be made, let us make them bravely and maintain our dignity and self-respect. In times like these it is a great temptation to depart from the straight and narrow path of honor and professional dignity, but such things can only result disastrously to self and the profession whose standing we should always strive to maintain. It is a sad, sad sight to see men who have been bright jewels in the profession, who have stood high in societies and been honored with offices of dignity, through restless desperation, take backward and downward steps, which sacrifices not only their own professional self-respect, but injures the calling which elevated and honored them. Such acts are as cowardly as that of the suicide, who has not the moral courage to live and face the issues which confront him. Literally, it is suicide—professional suicide, because he is no longer an honored professional gentleman, but a tradesman. Then, again, it will result in complete failure as a *business venture*.

A man may start as a cut-price advertising tradester in a community and do as well as such men deserve to do, but a man who has stood at the top and borne honors and wielded influence does not do it, for it advertises to the world that he has failed, and the public prefer to patronize a success and not a failure.

Stand firm, brethren. The firmament may darken, the clouds may lower until not a ray of light may be seen to lend encouragement for the future, but these may be lifted in a single night. It is only a matter of a short time. We can suffer in the flesh and it is no disgrace, but to sacrifice pride, honor and dignity is to open a wound which never heals.

H. H. JOHNSON.

Co-operative Dental Society.

There seems to be an awakening of interest in Indiana since the advent of the *Indiana Dental Journal*, which is a good one. A few years ago the farmers formed the "Grange," and bought supplies on the co-operative plan. Now it appears that the Evansville, Ind., Dental Society has formed a plan and is purchasing dental material in the same way. Here is what a writer says about it in the *Indiana Dental Journal*:

"After some little effort, our local society was organized with a membership of fifteen. The idea occurred to me to have two strings to our bow. So, we not only came together to help each other professionally, but, finding we all used practically the same amalgam, rubber-dam, burs, strips and other necessities, I persuaded the city society and about twenty other dentists from the surrounding towns to pool our issues and buy in quantity rates.

"I was selected as purchasing agent, and on amalgam alone we saved \$56 on our first purchase. On other articles, so far, there has been a saving of a little over \$100, and that, mind you, on materials and makes that we have been using for years.

"By this method we have worked up not only a keen interest in our society affairs, but the pecuniary saving is of moment. We meet monthly in Evansville or some near-by town. We have a membership of about forty, and hope soon to take in all the reputable dentists near us in Kentucky.

"Our object is further to give the dentists who cannot afford to take longer and more expensive trips a means of association."

Here is what the wide-awake editor, Dr. Hunt, says on the subject:

"Bravo, Evansville! It is a worthy object, and evidently in the hands of capable, competent men.

"The method of purchasing supplies detailed in the letter of our correspondent should be considered with keen interest in every city in the State. Many men can be more quickly convinced of the value of associated work if the association conduces to plethora of the pocketbook. The old saying that a penny saved is a penny earned is no more true in other business than it is in dentistry. The expense of material is a considerable item in the ledger account of the practitioner, and when it can be cut down so easily good business sense should prevail. Now, if the Evansville Society has a by-law providing that if a member misses more than two consecutive meetings without a valid excuse he is suspended from the society for a period of, say three months, and such suspension carries with it a loss of the benefit of associated buying of materials, they will have solved the vexed question, 'What can we do to increase the attendance at our societies?' The members will attend religiously if absence militates against their financial welfare. Then, after a time, attendance will become a habit, and the society will be able to boast of the large attendance percentage they can show.

"Altogether, the scheme gives promise of being an excellent one. It brings the members together in a way that the ordinary pur-

poses of association work do not. It gives them a common bond of material interest, which will serve as the tie that binds, to hold them together for scientific exchange of thought."

Dental Civil Service Reform.

(Continued from page 471.)

The *third* essential for associate effort is that upon which, most of all, perhaps depends the long-continued vitality of the organization, viz, a *sufficient number* of earnest, conscientious, able workers.

There is *so much* concentrated in these attributes that it is a difficult thing to grasp the requirement, and a more difficult thing to gather the *essential* itself.

It is, evidently, from the absence of this *essential*, that few State societies have done much other work beside contributing each its long list of Presidents, and I think the records will show that even the National Associations have gradually lessened in what vigor was primarily enlisted from their failure to maintain a continued interest for such workers as *must form this third essential*.

I venture this opinion as based upon a very careful review of the papers, discussions and published "Transactions" of the National and State societies during the past fifty years.

It is not *directly* the province of this paper to discuss the so-called "progress," which has become the stereotyped assertion of the later years, and especially of the last decade; but a very careful scrutiny fails to show any solid ground for the least of such pretensions, while, on the contrary, every year shows diminished interest, lessened professional esprit, more of individual antagonisms, fewer practical suggestions, and a growing disposition for fictitious valuation and unwarranted assumption—with the culmination of the dissolution of our American Dental Association, the *third* dissolution in *less than sixty years*!

The very least that can be said of this is that it is not a satisfactory record of "associate work."

"Earnest, conscientious, able workers" in artistic, philosophic, historic and other directions, have given us no such record; already some such efforts are beginning to count their age by centuries, while American dentistry to-day begins its National count with—one.

Indeed, with all that has been given in papers, discussions, even editorials! it is by no means *settled* as to whether "Dentistry" is a profession or a specialty—the society papers, discussions and journal articles giving every month the most absurd conglomeration of these two terms possible to devise. It does not seem that earnest, able workers would leave even this thus, but from the least to the greatest of important *dental* matters there is an evident lacking of *something* which in years gone by instigated the men who practically have given all there is of value in the *dentistry* of to-day.

Dentistry is a wonderfully well worked up alleviator of human suffering. As I have known it, from intimate association with men excellently well informed in their special branches of its work, I should say that few callings have been more thoroughly exploited, but that *any extended knowledge* of all this systematic gathering of "ways and means" exists, I gravely doubt.

Dissemination of this would give the earnest workers that pabulum which would tend to draw them together, and *each* would feel an interest to *give* something in return for that which he had received—but *he must feel that he has received*.

It is the absence, almost every time, of anything worth coming for that gradually weans the components of this *third* essential from all interest in the annual, and far more, in the monthly "gathering of the clan."

J. FOSTER FLAGG.

(To be continued.)

To Remove Plaster Impression from Cup.

We have used the following method of removing plaster impression from cup with so much satisfaction that we are prompted to reproduce it. Dr. Battershell, who first made it known, says:

"To remove a plaster impression from the tray quickly without marring tray or breaking the impression, proceed as follows: Directly after removing the impression from the mouth, trim away all surplus plaster which will bind the impression to the tray; place a Bunsen burner upon the center of a folded towel, and over the flame of the burner move the impression, cup down, until it pops loose. This result is effected by the generation of steam between the tray and the impression, and is accomplished in less than a minute's time. The impression falls off unbroken upon the folds of the towel."

Cleaning Teeth.

This is not so simple an operation as some would make believe, but one requiring time and care, and one that is very important. Here is the way Dr. Potterf, in the *Ohio Dental Journal*, does it: Take a pledget of absorbent cotton, saturate it with alcohol and go over the teeth, cutting all fats and removing starchy foods. Then with a little cotton saturated with a 3 per cent. solution of pyrozone; then with rubber cups or moosehide discs dipped into pyrozone and pumice. After removing all traces of lime deposits, polish off stains; if there are any that do not yield readily to this treatment, touch such stains with compound tincture of iodine, and endeavor to polish off as before; if this does not remove them, touch stains with 10 per cent. solution of trichloroacetic acid, this usually removes all traces of stain; then finish with chalk and pyrozone.

Dentition.

The views in regard to the effects of teething on the health of children have undergone a complete change. The doctors of the old school were accustomed to lay at the door of dentition most of the diseases occurring between the ages of six months, and two years. At the present time many practitioners go to the other extreme, and deny that teething causes any symptoms whatever. Probably the truth lies in the happy medium, for while the importance of dentition in causing disease has doubtless in the past been greatly overestimated, yet it is true that reflex symptoms, due to teething, may arise, often of a serious nature.—*Maryland Medical Journal*.

Sensitive Dentine.

Dr. C. B. Rohland, of Illinois, says: "By adding just sufficient carbolic crystals to cocaine hydrochlorate and rubbing together with a spatula until the cocaine is dissolved, a thick syrup is obtained, which is escharotic, antiseptic, obtundent. With this he often obtains most gratifying results in the treatment of sensitive dentine in cavities of decay. It should be used with the rubber dam, dryness to the verge of desiccation secured, applied warm, and treated in situ with the hot air syringe, as hot as can be borne, and again dried before excavating. If one application fails to give the desired result, two almost invariably will be effective."

Fusible Alloy.

The following metal will melt when thrown into boiling water. It has a consistency equal to silver and can be used with satisfactory results in crown and bridge-work, since it can be poured into impressions taken from modeling compound: Bismuth, five parts; lead, three parts, and zinc, two parts.—*Dental Digest*.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., JUNE 16, 1898.

NO. 40.

THE GEORGIA STATE DENTAL SOCIETY.

The recent meeting of the society at Lithia Springs, was in many respects the most notable held in many years. The attendance was larger than usual, due no doubt to the central location of the Springs and to the political aspirations of certain non-members.

Comparatively few papers were read, but what was lacking in number was more than compensated for in the excellence of the subject matter.

The clinics, somewhat hurriedly and unexpectedly presented, were decidedly interesting and valuable. The manner in which they were given proved highly satisfactory, and the program will doubtless be adhered to in the future. The society being called together in regular order, each clinician had the attention of the entire body. In this manner all had the benefit of the questions and answers relating to the demonstrations. We note in this connection that in the enthusiasm of the moment clinicians sometimes lay undue stress upon the originality of certain methods, when in fact their origin and history had long been known and practiced by others. If this is the result of ignorance it is excusable, of course, but if it is the outcome of inordinate egotism and desire to mislead, no language is any too severe in its condemnation of such practice. The wide dissemination of dental literature and the frequent intercourse between members of the profession now-a-days, renders plagiarism impossible without instant

detection. It therefore becomes an exceedingly dangerous thing to "monkey with."

Dr. Ottolingni contributed an exhaustive paper on the subject of crystalloid gold, emphasizing its desirability in certain localities. Accompanying the paper were small samples of Williams's crystalloid gold, which were distributed complimentary to members. The subject elicited warm debate, much of which was commendatory, while a few declared it to be the "lazy man's gold." Dr. J. Y. Crawford, in his well-known energetic style, as might have been expected, roundly denounced, not only crystalloid, but all forms of cohesive foil for such localities as were indicated in the paper, preferring Abbey's soft gold, the virtues of which were extolled with much fervor and unction.

The society as an organization differs, perhaps, from that of any other dental society in this country, in that it continues to discuss with old-time enthusiasm, the rather antiquated theme of nerve capping. It is a subject dear to the hearts of some, and is being pressed upon the attention of the members as one of paramount importance.

It was a notable omission that cata-phoresis was not referred to except in a most casual way, though its advocates were present in goodly numbers.

Dr. Colson, of Charleston, S. C., read a unique paper on the proper care of the lips of the patient and hands of the operator, and demonstrated the use of a new hyperdermic needle.

Five applicants for license appeared before the Examining Board, with the result

that one failed to convince the Board—though a recent graduate—that he knew enough to practice.

Under the new dental law the society nominated ten men, five being members and five non-members of the society, to present to the Governor for appointment to the Examining Board. Among the former the old Board was nominated as a whole.

The general harmony and good fellowship which prevailed among the membership was frequently referred to, but this was only the proverbial calm before the storm, for, much to the surprise of all, just before adjournment, charges and counter charges of "unprofessional conduct" and "violation of the code" fell thick and fast, and for a while it seemed that "h—l had broke loose" in that part of Georgia. Each of the accused protested his innocence and demanded immediate investigation. They were quickly accommodated by the appointment of a committee, who, in due time, declared all the parties innocent.

While we have no criticism to offer against the committee, for they are all recognized as ethical gentlemen, yet the report was a surprise to many. The nature of the charges was such, in two instances at least, that seemed to require corroborative evidence, and this could not have been had within the time consumed by the committee.

The point was well taken when one of the members of the society expressed himself as not so very anxious for *new* members as he was for the purification of the older ones.

We fully agree with him, and when the investigating committee was appointed, the purification process was confidently expected to begin.

In recent years there has been a disposition among one or two to stir up discord and to fan the fires of hate. The motives are too well understood by the entire membership to receive even casual notice, and the parties interested in this nefarious busi-

ness are but weaving renewed evidence of their own guilt.

As a whole, much good was accomplished and the meeting voted a success, a more extended notice of which will appear in the next issue.

J. A. C.

CENSURABLE PRACTICE.

The reckless use of dangerous drugs, local anæsthetics, and wholesale extractions of teeth that should be preserved. A practice prevalent and rapidly increasing, and sometimes, through ignorance, is carried to the extent of murder; murder right out, no "heart failure" about it. Bad practice based upon a false theory of right and justice, and sustained by a willingness to jeopardize life for small gains, and the *smaller reputation* of being able to *extract teeth without pain*.

The dangerous, deadly remedies (innumerable) now on the market are more freely used by the ignorant and uncultured in the profession than the better informed and more considerate, who think it is right to consider well before acting. The abuse is bringing reproach upon the profession, and something should be done to check the evil. Timely and right action on the part of Dental Colleges, National, State and local Dental Associations, could accomplish the result requisite for the good of the human family, and for the credit and honor of the dental profession. The sooner some action is taken in the matter the better. Abuses and hurtful practices should never be sanctioned and indulged because they are freely practiced, and in some localities are popular. For the simple operation of the extraction of teeth, dangerous remedies for the alleviation of pain should not be used, except under peculiar circumstances, and then with a great deal of caution.

I think I can safely venture the assertion that nineteen times in twenty, the pain from introduction of the material in gum-tissue to prevent pain is quite as disagreeable as

extraction without anæsthetic. The thing important for success and satisfaction in the operation of tooth extraction is a definite knowledge of the anatomy of the teeth and alveolar process, and to be well fortified with forceps suited to each tooth, and elevators that may be requisite under some circumstances. A plain, practical, common sense procedure, based upon a knowledge of the anatomy of the parts involved, is more important for success and satisfaction than any one or all the local anæsthetics in use. A very large percentage of all of them on the market are *claptrap* productions of no merit, and when used prove a fraud.

Owing to the impression that has been made upon the public mind, that teeth can be extracted without pain by the use of anæsthetics, thousands of teeth are sacrificed daily that could be comfortably preserved for years, and possibly through life. Shame upon the profession! If there is not some concert of action soon to rectify the false practice, we will have a toothless population ere the lapse of a few decades.

B. F. ARRINGTON.

To Keep Engine Burs in Good Condition.

"Polish with a cotton duck wheel on the lathe, using either pumice-stone or emery flour. In polishing the bur end, keep the blades parallel with the direction the wheel is turning. Little grooves will form in the soft wheel, and all the rust and dirt will be quickly removed, leaving the bur considerably sharpened."

H. H. JOHNSON.

To Remove Gold Crowns.

Some time ago Dr. Dunn, of Chicago, gave us the following for removing gold crowns:

"Cut an oblong hole in the crown just over the stump of the root, and with a narrow chisel wedged in between the inside of the crown and stump, the crown can be easily removed."

AIMS.

To what do we aspire?

Sometimes we see a man commanding the respect of a nation; occasionally, not even thus limited, all nations would love to pay him homage. And rarely is the question asked, From what station in life does he come? Parentage or financial standing might be asked of a boy; but when the age of maturity comes the question changes to, How does he stand as an individual, separate, personal being? How does he "redeem the time?"

A few generations change an aristocratic to a plebeian family, from the simple reason that a true condition is realized. Those who have wealth and social standing are satisfied, idly revel, become sluggish, and in an unexpected time they are in need of all that makes life pleasant. They lost aim.

Fortunately, when this condition is realized, an aim is easily found. Restoring the intellect to its normal activity is the next step. And then with energy applied the former happy state is attained. This is the providential law "the survival of the fittest." It concerns all men in all stations of life. Now from our standpoint, To what does that dentist who is satisfied aspire? He never attends the society meetings—he knows enough. He never contributes to the journals, it would cost him an effort. (An unused mind will weaken.) He is so well pleased with his attainments that he doesn't even subscribe for the journals. These cut him off from growth, and when growth stops death starts. He has lost aim.

The man who commences to study dentistry with the purpose that he will get every idea from every possible source and use them to the best advantages for benefiting his patients, will succeed in spite of hard times, wars, or any other troubles. He has a goal to reach and will reach it as surely as the light follows darkness.

Wealth and social standing can't help

much. A body is polished by rubbing another which is as hard or harder against it. Men brighten as their intellects are divested of follies by intellects that are clearer. We all must meet with mental friction or become corroded with conceit, prating before an ignorant public that we are *smart*.

Now, for what shall we Georgia dentists aim?

1. Give our ideas to the WEEKLY. We can't get new ones in our heads until some of the old ones get out. "If you would receive, you must give."

2. Do all in our power to get that book on Dental Hygiene in our public schools. It will help everybody in the State.

3. Serve faithfully on the committee to which our new president will appoint you.

4. Don't speak evil of a brother dentist.

5. Charge enough for work to meet all indebtedness. The man who fails in this injures the whole profession. Let the fact that we are dentists be a badge of honor.

6. Read everything on dentistry that we can pay for.

W. H. WEAVER.

An Open Safety Pin Swallowed.

Dr. Joseph Clements (*Pædiatrics*, June 1st) reports the case of a baby seven months old who, on July 27, 1890, swallowed an open safety pin. There was some fever and sore throat, with gagging, coughing, and hæmoptysis for a while, but afterward the child appeared well, and the pin was passed on August 22d. No bloody stools were seen during the passage of the pin, which occupied thirty-two days. The child is healthy and well.—*New York Medical Journal*.

Tooth Manufacture.

About 4,000,000 false teeth are manufactured annually in the United States, while one ton of gold and three tons of silver and platinum to the value of \$100,000, are used in filling teeth.

MINIE-BALL IN ANTRUM THIRTY-FIVE YEARS.

This interesting case is recorded by Dr. F. D. Davis in *Ohio Dental Journal*:

"In April, 1897, J. W—— called at my office to seek relief from pain in his face and jaw. In the battle of Perryville, Ky., 1862, he was struck by a ball just below the right cheek bone. Patient stated that the wound discharged through the cheek for a while and then at the opening on the zygomatic surface of superior maxillary, but during the last ten years the discharge had been through the nose. His stomach eventually became weak, appetite failed, and at the time of presentation there were signs of general poisoning and indications that the patient would not live much longer unless relief could be obtained. He complained of continued and severe pain in the face and jaw, and for years had not slept more than an hour at a time on account of pus accumulation and discharge from the nose. Several physicians had told him that the presence of polypi in the nose prevented him from breathing through that member, and advised their removal for relief. Exploring through a small opening at the zygomatic surface of the superior maxillary, I could find no necrosis, but found some hard substance that indicated the presence of a foreign body in the antrum. The second superior bicuspid and first permanent molar were missing, and applying a local anesthetic I extracted the second molar to obtain adequate room for operation. With a trephine and excising forceps I cut away the process and attempted to remove the foreign body, but it would draw back each time. While it was in the antrum, it was not resting on the floor but seemed enveloped in a tough membrane. With a hooked instrument I finally succeeded in tearing away the body finding it surrounded by a tough and highly inflamed membrane covered with stringy mucus that looked like a false membrane.

It proved to be a minie-ball encysted, a black substance about one-eighth of an inch in thickness covering the ball.

The night after removal of the bullet the patient enjoyed the best night's rest he had had in ten years. He could breathe freely through the nose, and there was no after trouble.

The wound was washed out with peroxid of hydrogen and warm water and packed with iodoform gauze.

Borolyptol one part to three of water was used as a wash, a rubber plate was constructed to cover the roof of the mouth, attached by bands to the third molar and first bicuspid. This covered the parts and prevented ingress of foreign matter. The patient presented for a few weeks then treated the case himself. The wound healed rapidly and the patient gained twelve pounds the first two months.

He experienced no after trouble and is now a well and happy man."

Leprosy in Cuba.

Through the *New York Medical Journal*, we learn that lepers are common in Cuba, and that the danger of contact is about that of syphilis, to which the disease bears many points of resemblance. That there is little danger in allowing lepers to remain in a community, provided they are not brought into intimate relationship with those not affected.

Treating Slight Wounds.

As a covering and protection for slight wounds on the hands, it has been recommended that an application of collodion and Peru balsam (1:10) gives excellent results. This will remain intact and be perfect for days; and washing the hands with soap and warm water does not disturb it in the least. It is easily prepared and yields satisfactory results.—*Digest*.

Quick Process for Nickel Plating.

There is no reliable method of depositing nickel from its cold solution, but a thin and adhesive coating may be given articles of brass, iron, etc., according to the Standard Formulary, by the following process: Boil in a copper vessel a saturated solution of zinc chloride and an equal quantity of water. While boiling add hydrochloric acid, drop by drop, until the precipitate at first thrown down is redissolved. Now add zinc in powder, until the bottom of the kettle is nearly covered with a precipitate of zinc. The bath is now ready for the addition of a salt of nickel, and you may use either the sulphate or the nitrate. Add it in sufficient quantity to give the bath a strong green color. The articles to be nickeled are now hung in the bath by means of a zinc wire, or a strip of sheet zinc, and a few pieces of the latter are thrown in along with them. Raise the heat to a strong boil and continue it for several minutes, or until the articles are covered with a bright coating of nickel. The articles should be thoroughly cleaned and free from grease before being put in the bath.—*American Druggist*.

To Prevent Plaster Impression From Sticking to Teeth.

"Dr. L. C. Ingersoll advises adding to plaster of Paris from one-third to one-half of pulverized pumice, according to the strength of the plaster. By this means he claims that adhesion to the teeth is almost entirely prevented, and that there is less liability to fracture of the impression on its removal from the mouth."

If you are not taking the WEEKLY, you are cheating yourself. Send one dollar and try it for six months. You will get a copy once a week—twenty-six copies for your dollar. Even from Central America a dentist writes, "I must have the WEEKLY."

Altitude and Conserved Dental Pulp.

Let a person for whom a tooth pulp has been treated, protected and filled, go from a small to a greater altitude, and that same tooth that was perfectly comfortable before the ascent, will give trouble. The atmospheric pressure grows less as the altitude grows greater, while the heart's action is not less strong, and it forces the blood into the circulation with so much greater power that the dental pulp will be sure to feel its bony confines and will cause pain. This fact was first brought to our attention by Dr. E. S. Chisholm, who lived then in Alabama at a comparatively small altitude, and would go for the summer to Mont Eagle, in the Cumberland Mountains, where hundreds of people from the lowlands of Mississippi, Louisiana and Alabama gathered. He found much trouble from teeth so treated for those whose homes were in the lowlands.

Bearing on this subject we quote an extract from an article by Dr. Powers, of Denver, in the *New York Medical Journal*. In discussing the comparison, he advises the avoidance of operation where possible on persons who have recently come from the sea level, and especially if they show any cardiac weakness, owing to the increased action of the heart and lungs rendered necessary by the rarefied atmosphere. Pulmonary invalids, however, who are well at great altitudes frequently suffer if removed for operation, and in some cases such invalids might with advantage be removed from the sea to a higher level for that purpose. Hemorrhage in general is rather more profuse at great altitudes, particularly the oozing from the smallest vessels; bleeding, however, he considers a little better borne, and saline infusion less frequently demanded. The chance of sepsis he considers equal in either situation, with a proper technique. Operation wounds in

tuberculous patients he considers heal more rapidly, and the healing is more permanent in Colorado, and he remarks upon the small proportion of pulmonary invalids in whom surgical tuberculosis is developed.

Investment Cleanly and Time-Saving.

Woolly asbestos, well saturated with water, forms an investment that in many cases fully replaces the usual plaster and sand, with the advantages that it is more cleanly to handle, does not run into the cracks and crevices we desire to fill with solder, and there is no waiting for it to harden. The blow-pipe flame may be safely directed upon it immediately. The pieces to be united, held together with hard wax, may be imbedded in it with the same facility as in plaster and sand. Without a moment's delay, the investment may be dried out and the wax burned off at the blow-pipe, instead of chipping it away, flux and solder applied, and the soldering completed in less time than is usually required for plaster and sand to harden. The investment does not crack, but with as little or even less mass than required of plaster and sand securely holds the parts together. Woolly asbestos is not expensive, and as it can be used over again repeatedly, the cost is trifling. With a little practice its use may with advantage be extended to many cases in which heretofore plaster has been considered essential.—*International Dental Journal*.

A few drops of strong ammonia water added to the water in which you wash will greatly facilitate the removal of grease and of blood. About half a teaspoonful to an ordinary basin of water will be the right proportion. Of course, you must use soap as well.—*Medical and Surgical Reporter*.

Shallow running water always makes a noise; while deep water moves with noiseless power.

Root Perforation.

There have been various methods of treating perforated root-canals. In fact almost every practitioner has his *own* way, just as he has his best-of-all way of filling nerve canals generally. We do not remember to have seen this idea of copper amalgam treatment before. We can, however, see where there might be an objection to this method, even though it is a success in some ways. In teeth of a porous nature, with large tubuli, serious discoloration might occur, which would be objectionable even in the root of front teeth. Where the process and gum is thin over the labial side, a discolored root often shows a very ugly dark line, which is quite perceptible.

In root perforation, as in many other of like troubles, prevention is worth more than cure. A careful operator with good, well-made instruments, need not make such a mistake many times in life. We give this method that it may be tried and its worth ascertained.

To be brief, the method by Girdwood is to place a small piece of copper amalgam in the canal, and with a suitable instrument line the canal with it, covering the puncture at the same time. Allow the amalgam to harden before other operation is performed.

H. H. J.

Pulp Capping.

The above heading will surely bring a smile from some. This time we shall put the blame on our venerable friend Dr. Welch, editor of the *Dental Brief*. Here is the way he would treat an exposed pulp. He says: "Many recently exposed pulps may be saved by touching them with a flake of tannin. It mummifies the surface and often prevents further pain, tenderness or trouble, though, of course, this surface should be protected, and the cavity finally filled nearly to the surface with cement and finished with metal. When not really ex-

posed, but aching from a softening of the dental covering, instead of removing these layers of dentin besmear them with a very little thin paste of tannin, carbolic acid and oil of cloves. This will make a leather of these soft layers, and by placing over the application a disc of paper the cavity can be partially filled with cement and completed with metal."

Cotton Polishing Cones.

Dr D. V. Beacock gives this interesting item in *Ohio Dental Journal*. We have seen our Dr. Catchings demonstrate the same thing for polishing cavity margins. Don't know where he got the idea, but certain it is that this will do to go in print:

"I have often been annoyed when finishing a plate with plain teeth, to get anything that would polish between the teeth, but have found cotton batting polishing cones to be just the thing. They can be made as small as one may require, cost nothing, cut very rapidly, as they hold the pumice or other abrasive material in the fibers, and can be made to hand in a moment of time. All one has to do is take a bit of cotton batting, the size he requires the cone to be, hold it between the ends of the two forefingers and thumb against the point of screw or cone mandrel when running, and it will be formed in an instant; then wet with polishing mixture and cut off the small end with scissors. I just happened to strike on it a short while since and was so pleased with it that I thought it might be of use to others. Whether it is new or not I can't say, but it is new to me."

If the solution of cocain is warmed before using, its anesthetic effect is more rapid, more intense, and more lasting.—*Indiana Dental Journal*.

The place of meeting of the Missouri Dental Association has been changed to St. Louis, at Planter's Hotel. Time, July 5.

Board Nominees.

Governor Atkinson, of Georgia, will appoint from the following list of names, recommended by the State Society, the Board of Examiners, under the new law. The first five names are members of the Society and composed the old board. The last five names are non-members of the Society:

J. H. Coyle, Thomasville.
A. G. Bouton, Savannah.
D. D. Atkinson, Brunswick.
H. H. Johnson, Macon.
B. H. Catching, Atlanta.
E. H. Reed, Eatonton.
S. B. Barfield, Macon.
Thomas Cole, Newnan.
W. C. Cleckly, Augusta.
F. R. Parramore, Valdosta.

C. V. ROSSER, D.D.S.,

President of the Georgia State Dental Society.

C. V. Rosser, D D S, President of the Georgia State Dental Society, was born at Bowden, Carroll county, Ga., September 24, 1861.

Entered the Dental Department of Vanderbilt University 1883. Graduated 1885. Located in Elizabethtown, Ky., 1885. Was elected demonstrator of his Alma Mater for the session 1886-1887.

Was elected a member of the examining board of Kentucky 1888. Moved to Atlanta 1890. Was elected to a professorship in the Dental Department Southern Medical College 1893, and 1894 was elected dean.

Aluminum Crowns.

Aluminum seamless crowns are easily made, with a crown machine, and with the cusps filled with amalgam, are quite durable and inexpensive.

Homeopaths want recognition in the army and navy.

Sweet Water Park Hotel, Lithia Springs, Ga., with Mr. Blake as manager, entertained the Georgia Dental Society splendidly.

The boys were so well pleased they voted unanimously to go there next year. The famed water of Lithia Springs keeps all the year round a good company of people there. Next year the attendance will be double, as the good news will spread from mouth to ear.

Treating Pulp-Canals.

Dr. Jackson says he finds the following dressing very valuable in treating foul pulp-canals, with soreness at end of root:

Menthol pip crystal, } Equal parts.
Chloral hydrate.

It is somewhat antiseptic, is soothing, agreeable to the taste and smell.

He says also that chloral hydrate is a solvent for camphor, which makes a solution of value to dentists.

It is not hard to distinguish the reading dentist from the non-reading dentist, when they are heard to speak at a meeting.

THE American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription \$2.00 per year; \$1.00 for six months—including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited. The editor is not responsible for the opinions of contributors. Advertising rates sent on request.

Atlanta, June 16, 1898.

Ethics.

"Thou shalt love the Lord thy God with all thy soul, and with all thy mind, and with all thy strength, and thy neighbor as thyself. This is the first and great commandment." And here we find the highest possible authority for that law which holds its beneficent influence over men, and associations and professions which value character, and which we call ethics. Here is found the great charter of all ethics, which teaches men of their duty to their fellow-men, which teaches men to love their neighbors, and such love is truly the soul of ethics. But ethics, professional ethics, is often met by the severest opposition. It is opposed because it sustains character in those who observe it, and because it opposes all the tricks and unfair methods of trade in professions. It binds men together in unity and in love. It holds them in harmony of thought and harmony of purpose.

It is the rule of him who would uphold the dignity of his profession.

It is the aversion of him who would yield to the avarice of trade.

It is cherished by the professional man.

It is abhorred by the tradesman.

The one will always greet it; the other will turn his back.

Between ethics and avarice there is no compatibility; there can be none.

Ethics will not endure avarice; avarice cannot face ethics.

When a man yields to the demands of avarice and would thenceforth follow his profession as a vender would ply his trade, he bids adieu to those with whom his professional life was associated, because there can no longer be harmony between them. He leaves because the "silver cord has been loosed and the golden bond broken." His former friends cannot love him as they once did, and a strange feeling of unrest circumagitates him when in their company. This is natural; and why should it not be so? They entered professional life on the same footing. They worked together for the same high purpose. They stood side by side on the floor of many a convention hall and together held aloft the banner of professional ethics. Henceforth he lives only for himself; his profession can take care of itself! Is it strange that there should be a feeling of unrest about him? Is it strange that he should feel that he is in company that is above him?

Is it strange that conscience suffers him not to remain where pride had placed him?

Is it strange that disappointment should seize those who once loved him?

Perfectly natural!

In the marts of trade professional ethics is the object of common hatred.

The man whose ability the world knows of only through advertisements in the popular press never has a good word for it nor those who follow it. Likewise, those who receive his money for publishing his great ability (?) to the world take special delight in assailing everything which pretends to ethics.

But let that be. Professions will stand before the world in the highest conception of the term. Professions cannot stand without ethics; therefore we conclude that ethics will stand. It must stand to honor those who uphold it. It represents absolute justice of man to his fellow-man. When ethics fall, farewell to that nobler life we call Professional!

Ethical Nuts Tightened.

The ethical bolts and nuts of the Georgia Dental Society got a much-needed tightening last week. That part of the vehicle has been wearing loose in some parts for some time. It was surely timely for some of the members to move about with their wrenches, tightening here and there. All things are now in very good shape. The bearings are oiled, and we do not look for any more looseness or rattling for quite awhile at least. It requires some nerve for a member to stand forth and call attention to such defects. That a society has such an individual should be cause for gratitude. It is only doing one's duty, though duty is sometimes unpleasant to perform.

Dental depot exhibits at state meetings are of great value to dentists who don't have them at home. There the dentist can see displayed everything of value to his business. The exhibit of the S. S. White Co. at the Georgia meeting was an unusually fine one, well located and handsomely arranged. The supplying of the chairs and instruments for the clinics, by Col. Selby, was highly appreciated by all. Without his assistance in this way it would be difficult to conduct clinics in a satisfactory manner. The Colonel deserves the praise he receives.

The WEEKLY is glad to announce Dr. W. H. Weaver, of La Grange, as one of its editors and proprietors. This new co-worker needs no introduction to his hundreds of friends, and will introduce himself to the dental public in a becoming manner.

Handling Children in the Office.

It requires a peculiar knack to handle children in a dental chair. They are wiser and more discerning than we often imagine. Harsh treatment will never make them our friends. While some will not submit, even under the most gentle treatment, the majority, however, are amenable to it. And after the first sitting, which should be short, and often only to get them acquainted with you, to let them see you are not the bear you were made to appear in their young imagination through dental office experience related by other members of the family. They may have heard: "You are going to the dentist; I am sorry for you—it's the worst place in the world. I hope that I will never have to go to another." With such remarks the child is familiar. Is it any wonder that they come to look upon a dentist as being something most awful?—something with long horns, fiery eyes, and smoke breathing from his nostrils. Just go back thirty, forty or fifty years, and put yourself in the child's place. Think of the description they have heard of that "grinding thing" which seemed to bore a hole through the top of the head.

Can you imagine why a child should not be frightened out of its wits?

Meet the little fellow away from the chair; engage his attention on something entirely foreign to a dental office; let him see that you are only a man, and without the awful appendages with which he has associated you. Get him to feel that he is with a friend; examine his teeth sitting in an ordinary chair; ask him to come and look at your big chair and take a ride in it; lift the chair and let it down; dismiss the little fellow with an appointment, and he will come to fill it without fear. His dreams will not be of a savage animal, but of an ordinary, every-day man, with a kind heart.

When he comes to fill his appointment, meet him in a friendly, social way. Tell

him to go and get up in the big chair, which he will do readily. Go to him and show him some of the "funny things" that he has been so curious to know about. Get his head on the rest; tell him that his tooth has bugs in it—funny bugs—and that you will get them out if he will hold still.

From one step to another, the most timid child can be carried successfully through tooth-filling. Give him the appointment card for the next sitting; make him feel that he is of importance and that you have confidence in him. Note the time to him for his next call; he will be on hand a firm believer in you. If you find that you may have to hurt him a little, tell him so, and ask him to be a brave little man. Deal perfectly honest with him in all things. Talk to him and not to his attendant.

Does it pay? Yes, in more ways than one.

Dental Civil Service Reform.

(Continued from page 483.)

The *fourth* essential for interesting associate effort is an *appreciative membership*.

How *much* this is to any society can only be *realized* by the other *essentials*! but it is the *body*, and it holds the same relativity to its organization that every *body* does to its entirety.

It is to the association what form, size, beauty and the possibility of strength is to the human.

It is to the executive corps the incentive for work, to the end that such material may be made the most of in every way.

It is to the earnest workers what the fallow ground is to the cultivator; what the promising lode is to the miner; it is that which their efforts are to benefit, which their work is to incite to other work, which is to bring them that coveted harvest in the shape of young, enthusiastic fellow-investigators.

To this end the "membership" is cultivated just as every other product is, with

care, with attention, with earnest, conscientious desire and hope, and even with affection; and when, now and then, this sowing of seed brings forth good fruit, I can imagine no more acceptable recompense for labor, no more enjoyable return for effort.

To this end is noted the thoughtful enlistment of members in committee work; the encouraging of entering into discussions; the willing and *clean* assistance given in the conduct of experiments or in the preparation of papers; while the gradual ripening of congenial intimacy is the wished-for assurance of the *continued* vitality of that organization which has come to be a "love" of the earnest workers.

In this way all unite for the good of all; constant attendance, continued interest; prompt acceptance of duties, and the *growing desire to contribute*, is the combination which insures that such association cannot easily "outlive its usefulness."

It seems to me that the presentation of the essentials to the long continued usefulness of the Dental Society might sufficiently suggest the reason for the unsatisfactory record which has been given by so many, but beside the presumptive absence of these important factors there is the tangible presence of that destroying element, "dental politics."

Who could be more utterly useless members than those who attend the meetings because of their presidential aspirations? Such members desire this office—for *what*? But it is *not sufficient* to silently think the answer to this question, for the query and the answer are vital to the welfare of the association.

What "earnest, conscientious, able" worker is at all benefited by the scheming, nose-counting plottings of those whose *object* is to "capture the offices"?

What phrase is so subversive of all desire for continuance in membership, so crushing to all desire to contribute worthy work, so repellant to every sense of manly dignity, as is this odious triplet of words?

I think it cannot be disputed that when *the right man* is chosen for official position, its duties are assumed with every other feeling except that of gratified *ambition*.

That it is gratifying to be selected as worthy of trust by one's fellows is equally indisputable, but the gratification is largely swallowed up in the feeling of responsibility, the doubt as to satisfactory competency (satisfactory to oneself), the hope for a justification of the choice, the resolve to "do or die!"—surely this is not "capturing an office!"

And when such are "good and worthy servants," is it "reasonable and consistent," that their places should be made vacant, and that their "earnest, conscientious, able" efforts should count for naught?

It may be that I have portrayed an "ideal" organization, and that the ideal is impossible of realization, but I think the lines indicated are better than those which have been followed, and in this faith, and, may I say? in some hope, I have ventured to offer them.

J. FOSTER FLAGG, D.D.S.

Seal Up the Pockets.

We note the following words in an article on pyorrhea alveolaris: "The mouth is such a favorite habitat for the myriads of pathogenic bacteria that it would be eminently desirable, if it were possible, to seal up the external openings of pyorrhea pockets." If this could be done and thoroughly accomplished, certainly a step in the right direction would be taken. When Dr. Adair, of Georgia, was making a special study of this disease, he claimed that the pockets should be closed, and gave as a closer a saturated solution of glycerin and tannin. Now the glycerin and tannin might be a desirable adjunct to follow his former treatment, but as a pocket seal it is a miserable failure, because it dissolves right out immediately. Let some of our

investigators experiment along this line and give us some preparation or combination that will be a beneficial non-irritant adjunct to other treatment and yet effectually seal these pockets to prevent the crowding of foreign matter into them between sittings. The inability to seal these pockets has proven one of the greatest drawbacks to our treatment in pyorrhea. H. H. J.

For Mummifying Pulp Remains.

One of the best combinations for the preparation of a root for filling, after removing the pulp to tan any remaining fibers, is tannin, made into paste with equal parts of creosote and oil of cloves.

DR. T. B. WELCH.

The non-member candidate for examining board honors was around and about at the Georgia meeting. The honors were given, however, to those who sought them not. Now it remains to be seen what the governor will do. Five will be chosen and five will be left. There will be weeping and wailing and smashing of teeth

I am glad to renew my subscription to the WEEKLY.

J. L. WILLIAMS.

Boston.

Just before setting a bridge or crown over a live tooth, coat the entire surface with varnish made by dissolving rosin in chloroform, with a little eucalyptus added. The above was given us some time ago by Dr. W. H. Bailey, of Wisconsin, as a good method for protecting live bridge abutments against cement. He also says a pair of broken-beak forceps make a good articulator for bridge articulator for crown- and bridge-work.

The so-called colorless tincture of iodine may be made by adding ammonia water to the ordinary tincture. It contains no free iodine, but is principally a solution of ammonium iodine.—*Atlanta Medical Weekly*.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., JUNE 23, 1898.

NO. 41.

ELECTROLYTIC PRODUCTS OF DENTAL MEDICINES.

In the *Ohio Dental Journal*, Dr. Weston A. Price has given an article under the above head which cannot fail to interest those who will study carefully what he says, and especially at this time, when cataphoresis is attracting so much attention.

It will be noted that Dr. Price takes issue with those writers who teach that certain drugs or medicines will be attracted to the positive and others to the negative pole, and uses his argument to show that different ions of the same drug will migrate to the opposite poles. In passing the electric current, he says, through any medicine capable of conducting the current, there will be a movement of a part of some of the molecules in each direction. For example, in passing a current through a solution of sodium chlorid some of the molecules will divide, the sodium ion going to the negative pole and the chlorin ion going to the positive pole. If platinum electrodes be used, the amount of sodium liberated at the negative pole will be equal to the chlorin liberated at the positive pole. And each, in any solution, will be an exact expression of the amount of current that has passed. These may react upon the electrode or upon the solution about the electrodes, as would happen with the chlorin in this case should we use copper or silver, or, in fact, almost any metal except platinum or iridium. Or as occurs with the sodium in this case, which reacts with the water, forming sodium hydrate, NaOH , with the

liberation of hydrogen. It is, in fact, very seldom that the ions themselves are liberated; they usually react with the electrode or with the fluid, with the liberation of a gas or a metal. All processes of electroplating are a simple electrolysis.

Space will not permit of any suggestions as to what electrodes or reagents would be indicated in the treatment of the various pathological conditions as pyorrhea alveolaris and bleaching teeth. We will restrict ourselves to the manner in which the molecules will divide and the direction these parts will move, giving in some cases the rapidity of migration. This latter quality is expressed by stating in centimeters the distance the ion travels in one second under a current of a potential fall of one volt per centimeter of solution, temperature at 18 deg. centigrade. For convenience the one-hundred-thousandth of a centimeter is used instead of decimals; thus hydrogen travels 0.0032 centimeters per second, which is usually written 320, meaning 320 one-hundred-thousandths. This will be the meaning of these terms throughout this paper.

The more dilute a solution the greater per cent. of the molecules will be ready to take part in the carrying of the current up to a certain point of dilution, and this point is known as the point of complete dissociation. This point varies greatly with different substances, but with sodium chlorid is at about one in one thousand, at which concentration approximately all the sodium and all the chlorin would be taking part in the carrying of the current. This matter of concentration or per cent. of

dissociation will not enter materially into the results of our practical work except at the extremes, and we need not consider it ordinarily. The reason for this is very simple, since in any solution capable of carrying the current there are always lots of free ions. When any compound substance, capable of conduction, is held in solution it does not maintain its molecular form, but some of the molecules, or all at sufficient dilution, will divide into two or more parts, called ions, usually two, but sometimes three or four or more, each carrying an electric charge; some positive and some negative, but always an equal amount of the two kinds of electricity. This takes place without the passage of an electric current, and, indeed, no solution will conduct a current that does not contain free ions; for it can only do so by their movement and giving up their electric charges to their opposite electrodes. When a current passes through any solution the positively-charged ions move toward the negative pole and the negatively-charged toward the positive pole. By no other means can a current pass through any liquid, except a metal. Very many substances do not dissociate in solution, as sugar. Some others do so, but to a very slight extent. The former are perfect non-conductors or insulators to the current, while the latter conduct but slightly. These latter include many of our dental medicines.

In electrolysing hydrochloric acid, HCl in water, H will go to the negative pole and Cl to the positive pole, where it will react with the electrode unless it be a very noble metal, and even then to a slight extent. If the current have a potential gradient of one volt per centimeter, and the temperature about 18 deg. centigrade, the H ions will travel with a velocity of 320 one-hundred-thousandths of a centimeter per second, or approximately three inches in an hour, and the Cl will travel to the positive pole with a velocity of 69, always carrying equal electric charges.

With sulphuric acid, H_2SO_4 , two H ions will go to the negative pole and SO_4 to the positive pole, where it will react with the electrode or with the water, according to the following equation: $2 SO_4 + H_2O = 2 H_2SO_4 + O_2$. If a copper electrode were used it would unite with it, forming copper sulphate $CuSO_4$, which would immediately dissociate and begin to assist in carrying the current, the copper forming a new ion and going to the negative pole and SO_4 to the positive pole.

With nitric acid, HNO_3 , the H will go to the negative pole and NO_3 to the positive pole with a velocity of 64.

With silver nitrate, $AgNO_3$, Ag will go to the negative pole with a velocity of 57 and NO_3 to the positive pole.

With potassium iodid, KI, K will go to the negative pole with a velocity of 66, and I to the positive with a velocity of 69.

With sodium hydrat, NaOH, Na will go to the negative pole with a velocity of 45 and OH to the positive pole with a velocity of 182.

With lithium iodid, LiI, Li will go to the negative pole with a velocity of 36 and I to the positive with a velocity of 69.

With ammonium hydrat, NH_4OH , NH_4 will go to the negative pole with a velocity of 66 and OH to the positive pole with a velocity of 182.

With hydrochlorat of cocain, $C_{17}H_{17}NO_4$, HCl, all investigations so far indicate that $C_{17}H_{17}NO_4H$ goes to the negative pole with a velocity of about 7 and Cl to the positive with a velocity of 69.

We are indebted to Prof. Morley, of the Western Reserve University, for these determinations on cocain hydrochlorat, which mean a tremendous amount of tedious experimentation. This means that the negative ion of cocain hydrochlorat will migrate about one inch into a tooth in one hour at a potential gradient of 25 volts.

I would like to call attention to the behavior of the Cl ion which goes to the

positive pole. If that electrode be anything but the noblest metals, as platinum or iridium, it will react with it, forming the chlorid. It will even do this to some extent with gold, not enough to positively exclude it as an electrode in cataphoresis, though it is not nearly so good as platinum, with which the chlorin reacts, but very slightly. Copper or silver, or German silver, or any metals of their class, would almost produce a failure if used for the positive pole in cataphoresis, because they would form a chlorid with the Cl and this would immediately dissociate, the metal forming the positive ion and go to the negative pole and the Cl, to the positive again. Thus in a short time this new compound would be carrying the current instead of the cocain hydrochlorat.

Almost any solution we may get hold of, unless prepared with the utmost care, will contain enough impurities to prevent us from determining by its conductivity whether it is an electrolyte or not, as for example, ordinary water, which is a splendid conductor, while absolutely pure water is almost as good an insulator as gutta-percha. Such purity cannot be had, however, by ordinary means. For this reason we should expect the best results in cataphoresis, and in my experience we do, from freshly prepared solutions of as pure as possible a quality of cocain salt, in distilled water the purer the better, and never should we use anything but a very noble metal for the positive electrode, preferably platinum.

It has been quite generally taught by some writers and quite generally believed, that in electrolysis, certain medicines move unchanged towards the negative pole, and certain others move toward the positive pole. *This is not so*, and every effort should be made to correct this terribly misleading impression. A part of the molecular contents of some of the molecules of that medicine go in each direction and electro-equivalent parts in each direction. Electrolysis must

not be confounded with osmosis, which is the movement of a substance held in solution as it diffuses to equalize the concentration.

FOR FILLING CHILDREN'S TEETH.

BY J. FOSTER FLAGG, D.D.S.,
Swarthmore, Pa.

Read before the Tri-Union Meeting of the Virginia, Maryland and Washington City Associations.

As the result of forty years of systematic consideration and demonstration of this line of dental work, I feel confidence in the stability of such teachings as from year to year I have given in my long lecture career, as I believe it to be conceded that "experience" is the teacher of teachers, and it has been *that* from which I have always striven to learn.

I was early impressed with the marked differences dictated by *principles* regarding *all work* done upon deciduous teeth in contradistinction to that done upon permanent teeth, for, with the exception of the *lancing of the gums*, work upon the deciduous teeth is governed by considerations and conditions diametrically the reverse of those which pertain to the permanent teeth. The prominent points, therefore, in relation to fillings are, *First*, That deciduous teeth subserve only a *temporary purpose*; therefore that *ordinary cavities of decay* should be filled in such manner as best comports with the age, disposition and desires of the little patients, while subserving sufficiently the temporary requirements; and, *Second*, Remembering that, as a rule, the first of filling work in deciduous teeth is associated either with fully formed roots or with roots in connection with which resorption has commenced to take place, and that this function is very important and should in no wise be interfered with by undue pressure or other irritation of pulp or surrounding

pericementum; and, *Third*, That every consideration in this work should point to the comparatively early loss of *rootless crowns* as the proper and best conclusion of deciduous dentition.

From these three considerations, it is evident that expensive operations are not warranted, because inexpensive ones practically subserve every purpose.

That the youthful years of patients would contraindicate work which required length of time for its doing, not only that undesirable impressions of dentistry may not be inculcated, but that every unnecessary infliction should always be spared the child. That the disposition of the patient should be regarded, temperamentally, and that filling materials should be selected under governance of the varied controls of quietness or restlessness, bravery or timidity, location, posteriorly or anteriorly, liability to attrition or otherwise, possibility of future liability to pulp irritation and consequent need for removal of filling if indicated; and, probably most important of all, with the recognition of at least a certain degree of compatibility of material with tooth structure in all cases, and with this thought in view more markedly just in proportion as the imperfectly formed tooth structure with its soluble, chalky inorganics imperatively demands the most judicious selection of that which shall best subserve the desired end.

And as a final pleasant thought, the possibility that a little brightly shining filling of gold might be a source of pleasure to the little one as a pretty trophy to show papa and mamma, uncles and aunts, and interested playmates, to whom should be given—truthfully—the information that “it did not hurt”! *for it ought not to.*

To all this, it is evident that *too much knowledge* of every attribute of our *four* filling materials for children's teeth—gold, tin, amalgam and gutta-percha (porcelain is not indicated) and of our lovely and

most useful and desirable “adjunctives” oxychloride of zinc, zinc-phosphate and temporary stopping, cannot possibly be acquired, for just in proportion as one is *thoroughly conversant* with these, just so is the wonderful adaptation of each to the special requirements of every individual case readily recognized and most beneficently and satisfactorily employed.

DISPLAY OF GOLD IN TEETH.

Forty years ago the universal practice in filling teeth was to *conceal material* and never expose gold to be gazed upon, if possible to avoid it.

The practice of that day, when such men as Harris, Hayden, Maynard, Parmelee, Dwinell, Wescott, Townsend, Clark, Badger, and a host of others of corresponding merit as practitioners of dentistry, were in the lead, and competent to set examples worthy of acceptance and to be strictly followed, was to treat for preservation of teeth so as to present as natural appearance as possible; that no one could from observation discern that pluggers and gold had been used in the mouth—very unlike much of the practice of the present day, when the unreasonable craze for display of gold in teeth seems to be on the increase. In many instances healthy enamel has been sacrificed (censurable) that gold could be displayed to more conspicuous advantage, with artistic surface finish, to attract attention and please the eye, and cause comment and inquiry, “Who filled your teeth? The fillings are beautiful.”

The question arises, which of the two, the former or the latter practice, is best for patients, less expensive, and most to be admired? If the former, which good judgment and good taste must sanction and commend, then as a profession, let us combine in condemnation of the latter, and encourage a return to first principles in that particular, and cherish the hope that ere the space

of another decade the practice of enamel-saving and gold-concealing will be more honestly and effectively practiced than at present, and the tendency will be onward and upward for the preservation of teeth.

In treating for the preservation of teeth, the normal outline and appearance should be preserved, if possible, regardless of the variety and fancy of patients, who have but little idea as to what line of practice is best for them and most in accord with the true line of *conservatism* that should rule in practice.

We must, through a true and honest line of practice, developing good results, educate the public mind on the subject, and by all means at command encourage dentists who are side-tracking to the detriment of the profession, and doing injustice to patrons, to pause and reflect, and fall into line of true practice for the better preservation of teeth and saving of precious metal.

To be able to fill teeth successfully and beautifully with gold, when requisite is a feature in practice to be admired and commended, and every man in the profession should be ambitious and strive to attain that degree of excellence in manipulative skill, but never abuse the talent.

To be a *fancy filler*, for notoriety and applause, is demoralizing and hurtful to the profession and very destructive to the healthy enamel, as is daily evidenced without close inspection, a practice that merits no praise, but much censure. B. F. A.

Dr. Crawford says some good things; one which he said a few days since at the Georgia meeting was, that water is the best dental prophylactic. The only trouble is to get people to use it and use it right. Not one in a thousand, he says, knows how to rinse the mouth. Patients should be taught how to rinse the mouth, *forcing* the water between the teeth, and to do it after eating. Another thing he said that is true: Tooth-brushes as made are too small; the larger a brush the better.

A SADDLE BRIDGE.

There are certain hygienic principles which must be considered in constructing bridgework. There is no disputing the fact that a filthy bridge would be an abomination to the devil, if he had to wear it. It is generally accepted that one so constructed as to admit of its being cleaned as easily as the natural teeth can be, will reach the zenith of possibility in dental mechanism, but some very eminent practitioners contend that a saddle bridge sunk into the gum tissue will be more cleanly, as it excludes all foreign matter from under it, and that the under surface of the saddle will never need cleaning. It is hard for the writer to adjust himself to this faith, but the following method is given to those who do make saddle bridges and they will find it interesting. It is taken from the *Ohio Dental Journal*, Dr. J. B. Snyder:

"Gold or other crowns are adapted to the abutment teeth, and a plaster impression is taken with the crowns in place. The impression is filled with plaster and sand, or Teague's compound. A strip of platinum is burnished to accurately fit the space between the crowns. The cast covered by foil should be scraped somewhat. Foil can be held in place by applying a little dammer varnish to cast. Diatoric teeth to fill the space are fitted with gold tubes; the tubes are made of sufficient length and the teeth are driven in with a wooden mallet, the buccal aspect being cut away so as to expose but little metal at cervical border.

"The teeth, with tubes attached, are now ready to be ground to fit the foil. Should the tubes be too short on the palatal side, a little foil can be burnished to fill up the space.

"After the teeth are all carefully ground to place, unite crowns, tubes and foil with hard wax, then remove porcelains and invest, using plenty of 20k. solder. After finishing, cement porcelains to place. Leave

no sharp places to cut and irritate the gum, as the fixture when placed will sink into that tissue the depth the cast has been trimmed. Some of the advantages that might be enumerated are, that there are no spaces for food to lodge in and under, an advantage worth considering, judging from the nauseous and foul-smelling bridge cases we are called upon to remedy; that the porcelains are not subjected to the heat of the blow-pipe; that repairing a bridge of this description is a sinecure, as in case of a broken porcelain, a very improbable thing, no breaks having occurred in any case, a new one can be cemented to place in the mouth, and that economy of precious metal has been used.

"After using the above system for nearly two years it seems the cleanest, most artistic, most economical, and altogether the most satisfactory method the writer is acquainted with."

How the Compression of the Carotids May Be Utilized in Surgery to Effect Anesthesia.

M. Jaboulay, *Bull. Du Lyon Medical*, says that one may effect prompt and effective anesthesia by the compression of the carotids.

The carotids need be compressed but a few moments. We will notice that the patient straightens out, closes the eyes and becomes quiet. The visage becomes blue at first, and then pale. Consciousness is partly, but not completely, lost.

It is now we may reduce a dislocated shoulder or coaptate the ends of fractured bones. Our patient remains unconscious for a few moments after pressure is removed. It is now that we may examine a fractured hip, make an incision or any other rapid movement.

This is recommended when other anesthesia is not to be had, or when a brief period of anesthesia is desirable.—*Medical Times*.

A Newly Discovered Remedy for the Opium Habit

Here is something of interest to the general public as well as the professional. If it is true, it is a great discovery. We take the extract from the *Medical and Surgical Reporter*, as follows:

In an unclassified plant, probably indigenous to the everglades of Florida, exists the most perfect antidote extant for the various forms of the morphine habit. It is known by the name of husa and is of a dirty whitish-green color, about two or three inches long. It has at its summit a ball-like white formation. Where the flower should be, this is hard, slightly lobulated, and is to all appearances like a small cauliflower. It grows in clumps in moist, shady places, particularly on the hammocks at the roots of the cabbage palms. It is of a low order of plants, above the mosses; it is, I believe, a cryptogam. It is possibly indigenous to the everglades, for I hunted for it in vain in many large hammocks in Florida. From Dr. McGregor I learned that it is a perfect antidote for all snake-bites, stings of insects, etc.; also an antidote for narcotic poisons. It is the most diffusible stimulant known, acting immediately.

I have subjected the plant to various tests, and found it an infallible cure for the opium habit. It takes the place of opium or morphine. Supporting the patient fully, it is sedative but not narcotic. It produces a slight elation, but no somnolent effect. To use the illustration of one physician who cured himself of the opium habit with it, a habit of twenty-three years' standing, one who was using forty grains of morphine sulphate daily, "It makes a man feel just as easy and comfortable as one feels after a satisfying meal. As soon as I learned its properties I sent some of the husa plant to several doctors I knew who used morphine; they one and all pronounced it 'a perfect success.' I have never known of a failure when the patient wanted to be cured. In

the hands of a careful physician, this remedy will be found efficient in the worst cases of drug addiction."

I first observed its use in connection with that of the arrow-leaf violet (*Viola hastata*), a plant that is found growing from Canada to Florida and westward to Arkansas. *Viola sagitata* has long been known as possessing properties antidotal to snake poison.

The Dental Lament.

The following gustatory article we take from the *Medical and Surgical Reporter*, and have styled it "The Dental Lament." The writer of the article has a poor idea of the duties of the dental surgeon if he believes his service is only to furnish dental substitutes:

"There is a particular fish, allied to the pike, met with in the seas of North America, which displays the probably unique characteristic of shedding its teeth annually. The teeth appear to be shed in the early autumn, this process being preceded by a period of inflammation of the gums. By October, however, a fresh eruption of teeth takes place. One is tempted to regret that this phenomenon should present itself exclusively in a mere fish. Nature has dealt rather hardly with human beings in according only one complete set of molars, for the most praiseworthy adaptations of the highly skilled modern dentist are but a sorry substitute for the masticatory apparatus provided for our use by nature's laboratory. A race that rejoiced in this automatic dental rejuvenescence would carry all before it, and would literally eat up the rest of the world. The pangs of unrequited love are as nothing to those endured daily and hourly by millions of human beings whose teeth have gone to rack and ruin, and the evils dependent upon defective teeth are by no means limited to sensory inconveniences. Half the cases of dyspepsia requiring treatment are due to imperfect mastication and consequent inadequate digestion, evils which would not

exist were our teeth methodically replaced like the hair of the epidermis. The teeth are dermal appendages, as physiologists never tire of telling us, and it is really remarkable that the ready reproduction which characterizes all other dermal appendages should be conspicuous by its absence in the matter of the teeth. Science, however, holds out no prospect of an improvement in this respect, and if we would retain the unimpaired use of our teeth we must e'en take care of those which fall to our lot, and failing this, have recourse to the nearest dentist for substitutes."

Tin.

Dr. J. Y. Crawford is a strong advocate of tin to be used on the floor and walls of teeth of weak structure, filling with cement and afterward removing the cement and replacing with gold.

It is a source of great satisfaction to notice how well preserved and improved are the walls of a cavity years after this treatment has been used. To those who have been reluctant in the use of tin in the anterior teeth of children, fear no longer. Though there may be a dark appearance while the tin is retained, when the time comes, say at maturity, these fillings can be replaced with gold, and there will not be the slightest discoloration from the oxide of tin; but should there be, is it not better to have a good tooth which is a little dark, than a crown or bridge, or possibly an artificial denture?

To prevent discoloration of the cavity walls use varnish and dry out with hot-air. This subject is getting old; but it should be insisted upon until its merits are overcome by better methods.

W. H. WEAVER.

We have received from Messrs. E. C. Moore & Son, Detroit, a broach-holder, which seems to be an excellent device for certain purposes.

Death to the Mosquito.

Two and one-half hours are required for a mosquito to develop from its first stage, a speck resembling cholera bacteria, to its active and venomous maturity. The insect in all its phases may be instantly killed by contact with minute quantities of potash permanganate. It is claimed that one part of this substance in 1,500 of solution distributed in mosquito marshes will render the development of larvæ impossible; that a handful of permanganate will oxidize a ten acre swamp, kill its embryo insects and keep it free from organic matter for thirty days at a cost of twenty-five cents; that with care a whole State may be kept free of insect pests at a small cost. An efficacious method is to scatter a few crystals widely apart. A single pinch of permanganate has killed all the germs in a thousand-gallon tank.—*Health.*

The Baby Dead.

THE WEEKLY joins in the sorrow of Dr. Brosius' home. The spirit of his only child has flown to brighter realms. When you shall have reached your German home, doctor, and when the twilight gathers around, your thoughts will turn to the little mound in far-away America, where the first-born rests. The soil of Freedom will hold in sacred trust the dust of the first-born of a noble sire.

Get ready for Omaha. There will be a through sleeper from Atlanta for the meeting of the National. If you go and wish to be with a crowd of jolly dentists all the way without change, write to THE WEEKLY. It will go *via* Nashville and St. Louis.

We are sorry to learn that Dr. James G. Palmer, of New York, is confined to his home by rheumatism. Come a little nearer Cuba, doctor.

Cementing Fillings In.

When contour gold or amalgam fillings drop out, and the margins of the cavities are not found destroyed by decay, they can be reset with thin cement and made to stand for years. The cavity and the filling must be thoroughly cleansed and dried before applying the cement, which can be more easily applied to the filling than the cavity. The dam must be on. Many dentists are now advocating the use of thin cement in cavities into which gold or amalgam is pressed, the cement allowed to set, the margins of the cavity freed of the cement, and the filling continued. The cement is claimed both as a retainer and protector.

Perforated Roots.

In root perforation, I have succeeded better with lead points. Make them round pointed and just long enough to go through hole made in root by bur or drill.

N. A. W.

Do you expect to go to the National, at Omaha, the last of August? If you do, and wish to go on a through sleeper from Atlanta via Nashville and St. Louis, write to the WEEKLY. Don't delay, it takes time to arrange for such accommodation. We are informed that the round trip will not be more than \$35.00 from Atlanta.

To enable some of our friends to become better acquainted with THE WEEKLY, it will be sent to them four weeks on trial, beginning with this number. One of the ablest and most esteemed practitioners in New York has written: "It's a gem."

There is an article on "Diseases of Tropical Climates" in the June 18th issue of the New York *Medical Weekly* that every educated dentist should read. It is of peculiar interest just now as we are going into the tropics.

THE
American Dental Weekly
 ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription \$2.00 per year; \$1.00 for six months—including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited. The editor is not responsible for the opinions of contributors. Advertising rates sent on request.

Atlanta, June 23, 1898.

Wake Up.

Now that Congress is considering the question of dental surgeons in the army and navy, it would be well for every reader of this to write to his Congressman, urging the passage of such an act.

There can be no question about the necessity for dental surgeons in connection with the soldiery of the United States. If an oral examination is made for entrance into the army, that part of the anatomy should be kept in good condition.

We cannot understand why the monthly journals are so reticent on this important subject. If any one of them has mentioned it editorially, the notice has escaped this editor's attention.

Come, brethren, wake up! Don't you know that if dentists were admitted to the army it would do more to advance the interest of the profession than anything else?

Speak out! Go to work and let us see

what can be done. Now is the time, while war is going on. Surgery in all its forms is prominently before the world. The medical journals are alive with army surgery. Everything is awake but our conferees. Wake up, editors!

Patriotic Dentists.

Dentists, like all other true Americans, are showing much patriotism. Many have joined the army; some are distinguished officers. The Missouri Dental Society has issued its program in red, white and blue, the meeting to be held in St. Louis, July 5.

Hygiene.

Abstract of a Paper read by Dr. M. N. Mirion before the Georgia State Dental Society.

Most dentists claim the care and preservation of the teeth should begin with the eruption of the first temporary tooth, but to my mind that is not the starting point. I think every mother should begin long before the birth of her child to follow the laws of hygiene to a letter, by taking plenty of exercise, eating such food as will build up the osseous system, and then, when the little fellow is launched on the tempestuous sea of life, he will have a sufficient amount of bone substance in the system to reasonably expect good teeth, although the parents may not be blessed with them. I recommend the judicious use of the brush, pick and silk floss. I believe that the use of the brush can be abused. Of course we all advocate rotary motion. I am of the opinion that if we use the brush once or twice a day and then use the napkin with the finger as many times a day, we would not find so much recession of the gums. For a long time the ill effects of wood toothpicks upon the gums have been noticeable. Where the teeth lap in such a way that a V-shaped space is left at the gum, if wood toothpicks are used the gums become inflamed and spongy. Food then begins to lodge and tartar to accumu-

late, until a diseased condition soon appears. If the system is not in good condition, before you realize it a case of pyorrhea alveolaris appears. I find that nitrate of silver is the best thing to be used in the shallow cavities in the temporary teeth, to preserve them and keep them in a healthy condition.

Now a word to ourselves. Do we pay a conscientious regard to cleanliness? Do we sterilize our instruments, our materials? Our patients have a right to the best service we can render under the most favorable conditions. Curtains and hangings often form traps for dust and organic matter. Some men's clothing does the same thing. It is the duty of every man to keep clean, and nothing will aid him more in establishing a good practice than to keep his office neat, clean and attractive.

Practical Dentistry.

Abstract of a Paper by T. P. Hinman, D.D.S., read before the Georgia State Dental Society, June, 1898.

SOAP ON DAM AND DISK.

A little soap on the dam about the holes will make it pass between crowded teeth with ease. Soap on the edge of a sand paper or cuttle fish disk will prevent it from catching to the dam.

SEPARATORS.

The pain of separation with the mechanical separator is caused by the separator jaws passing too far up and lacerating the gums. Place gutta-percha under the arms allowing it to rest on the teeth.

THIN RIM DISKS.

To make thin rim disks at a moment's notice: Place a disk on the mandrel and revolve it rapidly, at the same time holding an instrument against the part nearest the mandrel and passing it outward towards the edge. A narrow rim of grit will be left.

DEVITALIZING

To devitalize painlessly with arsenic: Place a small pledget of the devitalizing

agent on freshly exposed dentine as far from the exposure as possible, then place on the exposed nerve a pledget of cotton saturated with equal parts of clove oil and carbolic acid, dipped in a few crystals of hydrochlorococain. Seal lightly and ninety-five per cent. of cases thus treated will be a success.

VARNISH CAVITIES.

Varnish sensitive cavities with gum mastic dissolved in chloroform to prevent thermal changes.

TO KEEP CAVITY DRY.

To keep cavities dry without the dam: Place hard rolls of cotton over the salivary ducts; roll small napkin made of shirt bosom linen into a long rope and place around the tooth. Place a rubber-dam clamp on the tooth which will hold the napkin in place leaving both hands free.

ANESTHETIZE DENTINE.

To anesthetize sensitive dentine—place a pellet of cotton in the cavity saturated with carbolic acid and dipped in crystals of hydrochlor. of cocain. Blow hot air for a few minutes and a layer of dentine will be found to be anesthetized.

TESTING SALIVA.

If metals of a different potential be placed on the ends of wire which are in series with the milliammeter and these metals be placed in the mouth and the saliva is acid, it will cause the generation of a galvanic current which will deflect the needle according to the amount of acid contained therein, or if the saliva is neutral or alkaline there will be no deflection of the needle. The amount of deflection of the needle shows the degree of acidity of the saliva. If an acid mouth be washed with an alkaline solution, such as Phillips' Milk of Magnesia, it immediately becomes neutral again.

Dr. Beloll advises that castor oil be heated and thoroughly applied to the abdomen of the child suffering from constipation. Often this will move the bowels as effectually as when the oil is given by the mouth.—*Med. and Surgical Reporter.*

Plastic Fillings.

Abstract of a Paper by Dr. R. B. Adair, read before the Georgia State Dental Society, 1898.

I adopt the following method in preparing cavities and filling with amalgam. I would here state that I consider it good practice to fill all posterior to the first bicuspid with amalgam. I prepare the cavities with as much care as if I were going to insert gold fillings, and where the edges of the cavity are very frail, and in deep-seated cavities, I think it good practice to mix up a little cement to the consistency of thick cream and flow this into the cavity previous to filling with amalgam, but you must not allow the cement to come in contact with sensitive dentine or near an exposed nerve for it will surely result in the death of the nerve. Always flow first a film of the oxide powder mixed with oil of cloves and birch wood creosote, equal parts; then imbibe excess of liquid with bibulous paper before introducing cement. I have the amalgam ready prepared and insert it while the cement is still plastic. Introducing the amalgam in the usual way, I use a sufficient pressure to force out the excess of cement. This leaves the cavity filled with a cement lining with a metal finish. I think the amalgam should always be packed in with the same care used in filling with gold, using smooth surfaced pluggers and rotary motion; then finish by carefully burnishing over the surface tin-foil or bibulous paper. This forces out all excess of mercury and compresses the mass in one direction. Then at a subsequent sitting, say at any time after twenty hours, polish off the filling nicely and smoothly with the margins of the cavity, being careful to leave no overlapping material at any point, and especially no fullness on the grinding surface. This polishing can be best done with sandpaper disks or polishing strips, engine burs or corundum stones, same as for gold filling. For approximal fillings in

bicuspids and molars I am a strong advocate of the use of the matrix, either using two thin wedges forced in between the teeth, one from the outside and the other from the inside, and when the fillings are made these incline wedges can be removed without disturbing the filling.

Officers North Carolina Association.

The twenty-fourth annual meeting of the North Carolina State Dental Society was held in Fayetteville, N. C., May 11-13, 1898. The officers elected for the ensuing year are as follows:

President, Dr. C. W. Bauver.

First Vice-President, Dr. E. P. Keerans.

Second Vice-President, Dr. J. J. Battle.

Treasurer, Dr. D. L. James.

Secretary, Dr. J. S. Spurgeon.

Essayist, Dr. J. F. Griffith.

Supervisor of Clinics, Dr. V. E. Turner.

Executive Committee—Drs. H. V. Horton, D. E. Everitt, and J. M. Ayer.

Publishing Committee—Drs. I. N. Carr, S. P. Hilliard, and C. A. Rominger.

The next meeting will be held in Raleigh, N. C., Wednesday after the first Monday in May, 1899.

J. S. SPURGEON, Secretary.

Congress Now Acting.

American Dental Weekly:

Congress is now discussing the subject of dental surgery as a feature of general surgery in the United States army and navy. Let all the dentists interested in this movement bring their influence to bear on the representatives from their districts, now in Washington, to the success of this question. This is earnestly urged at once, for all who have given this subject careful thought know what a blessing dental surgery would be to the enlisted men.

Respectfully,

CHAS. C. STANLEY, D.D.S.

Columbia, S. C.

Jeweled Teeth of Ancients.

In the *Century* Mr. George B. Gordon, in speaking of "The Mysterious City of Honduras" and some of the recent discoveries there, says:

"No regular burying-place has yet been found at Copan, but a number of isolated tombs have been explored. The location of these was strange and unexpected—beneath the pavements of courtyards and under the foundations of houses. They consist of small chambers of very excellent masonry, roofed sometimes by means of the horizontal arch and sometimes by means of slabs of stone resting on the top of the vertical walls. In these tombs one and sometimes two interments had been made. The bodies had been laid at full length upon the floor. The cerements had long since moldered away, and the skeletons themselves were in a crumbling condition and give little knowledge of the physical characteristics of the people; but one fact of surpassing interest came to light concerning their private lives, namely, the custom of adorning the front teeth with gems inlaid in the enamel, and by filling. Although not all of the sets found have been treated in this way, there are enough to show that the practice was general at least among the upper classes; for all the tombs opened, from their associations with prominent houses, seemed to have belonged to people of rank and fortune. The stone used in the inlaying was a bright green jadeite. A circular cavity of about one-sixteenth of an inch in diameter was drilled in the enamel of each of the two front teeth of the upper row, and inlaid with a little disk of jadeite, cut to a perfect fit and secured by means of a bright red cement."

The word ion means a name given to the elements which appear at the respective poles when a body is subjected to electrochemical decomposition.

As Sam Jones would say, quit your meanness and send THE WEEKLY an item.

Removing Broken Drills.

A few years ago Dr. V. H. Jackson gave this practical item, which is useful:

"After removing as much of the dentine as can be from around the end of the broken point, take a piece of tagger's tin or German silver, very thin, bending it in the form of a cylinder the size of the broken shank. Then solder it to the end of the shank with a soldering-iron having no excess of solder. That leaves a socket, in which is placed a very little powdered shellac. This is warmed slightly and pressed up over the broken end."

Filling for Temporary Teeth.

To fill temporary teeth, mix small amount nitrate silver with cement. It makes cement very black, but seems to make it harder, and when worn out the cavities will be left hard and black from the effects of the nitrate.

N. A. W.

Why Is It?

Why is it that in dental literature, very often, you come to such expressions as sal-soda, soda, borax, and a good many others? If the dental profession is a scientific one, why not use scientific names, which every one should know?

JUAN F. OROZCO.

San Salvador.

For Pulpitis.

Dr. Juan F. Orozco, of San Salvador, sends the WEEKLY the following remedy for pulpitis: Equal parts of bromofrom and oil of cloves. He says it will give relief when nothing else will.

We are requested by a valued friend of THE WEEKLY to find out, if possible, where he can procure Brooks's articulating paste.

Chip-blowers often exhale an unpleasant odor; to overcome this, place a drop of oil of rose in the bulb.

H. H. J.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., JUNE 30, 1898.

NO. 42.

CLINICS AT THE GEORGIA MEETING.

The clinics were conducted differently to any previous year. The society was seated and each clinician demonstrated before it. Questions were asked and answered. Strict order was preserved. None were allowed to interfere with the clinician, save to ask him a question. A blackboard was used to advantage in making demonstrations plainer. The society voted the clinic a success. Surely it was an improvement over the old method.

Dr. Crawford demonstrated the following method of taking impressions with modeling compound. He takes more impressions with it than with any other material. There are some mouths in which nothing but plaster can afford good results, but in other cases compound will accomplish just as good, and in the majority of cases better, results than any other material.

Having determined to use compound, select the proper tray, being careful to see that it fits the ridge at all points. Everything being in readiness—the patient in the chair, the assistant in place, the saliva-pump in working order—go into your laboratory and soften your compound so that it will adhere to the tray; take it in your fingers and model it to the tray, using a little more than enough to fill the space, and when it is just warm enough to hold comfortably in your fingers, by the time you can walk from laboratory to the patient the mucous membrane of the mouth will stand it readily. Place it in position at once, and then

apply a big mop of bibulous paper, saturated in ice water, to the compound and hold it there until it is cold. Keep this up for 5 to 7 minutes, having the water-pump in the mouth. Finally relax the pressure and remove it, but to be doubly sure replace it and see that it fits the parts.

Dr. Catching demonstrated a practical method of extracting an impacted third lower molar, growing horizontally against the second molar, which was to cut off the coronal surface of the impacted tooth with a disk where it was in contact with the second molar. It should be left in this condition until, from further eruption, it resumed its former position, when another slice should be removed from it, when it will again grow forward. Then cut away the bone overlaying the roots of the tooth, take hold of it with a pair of lever forceps, and you can turn it up almost without effort. It would be impossible to extract in any other way without fracturing it.

Dr. Browne.—Instead of taking an impression as Dr. Crawford said, with the compound or other material in the tray, and pressed to place, I have the patient bite upon it. I then have both hands free to apply the ice-water.

Dr. Sid Holland.—Furthermore, gentlemen, in using compound, you want to hold it in place until it keeps its form permanently; it then beats plaster.

Dr. Jackson demonstrated a flexible injection-point. He says this is a flexible joint for either an atomizer or hypodermic syringe—serviceable at any angle. For atomizer, remove the nozzle from end of

tube, cut a section of small rubber tubing one and one-half inches long, place one end over the end of the tube, the other over the butt of an ordinary hypodermic needle, and your atomizer will be complete. For hypodermic syringe, make fast the rubber tubing to the syringe and needle with small annealed wire when pressure is necessary. The section of tubing may be cut a convenient length to reach the place desired.

Dr. Hinman demonstrated a method of vulcanizing which, he says, has proved successful in his hands. In polishing vulcanite he usually begins with very fine sandpaper following this with pumice-stone and prepared chalk, applied with brush wheels, felt-cones and felt-wheels. He does very little file work. After waxing and carving, he applies chloroform to the wax with a small wad of cotton, making a very smooth surface. When this has dried it is followed with a coating of sandarac varnish. This is done either in the case of plain or gum-section teeth. When the case is invested this varnished surface makes a very hard and smooth appearance. When the wax has been washed out, silex diluted with about two thirds the quantity of water is applied, and almost immediately rinsed out with water.

Dr. J. S. Thompson demonstrated the following method for strengthening base-plates: He takes a perforated aluminum plate, used for strengthening rubber plates. It is soft enough to be pressed into place; after which it is placed in a swaging apparatus, and with a few strokes of a hammer it can be forced right down. It can be used as a trial plate, and is very accurate in its adjustment to the mouth. After using it as a trial plate, put it back on the model and strip off the wax, or melt it out. It strengthens a plate wonderfully. It can be used either with a plaster or metal model, and the process for the two is very much the same.

Dr. C. B. Colson gave the following demonstration with the hypodermic syringe: First I wish to call your attention to a hypodermic needle which is cheap and of much value to us. It is thoroughly antiseptic, and costs so little that it can be thrown away after being used. It is called the Seamless Adjustable Needle, and comes in little bottles containing one dozen, costing one dollar. The large end is held in a soft lead button which screws right into syringe, and there is no leakage. The needles are thoroughly cleansed before being placed in the bottle, and previously placed under 300°. A needle, after being used, should never be placed in the bottle again; we are never justified in using the same needle twice. A more expensive needle can be used several times before being thrown away. Should the tube of the syringe become stopped up it can be cleansed by passing a wire through it. Always use small needles. By using large needles there is an enormous amount of regurgitation, but with small needles, no matter how hard the gum may be, there is no regurgitation whatever and the gum will receive all the agent which the apparatus can give it. When you enter the gum use the pumping motion. Do not use a great quantity of the agent. Use a strong preparation and an infinitesimal quantity of it. This is the true solution of using the hypodermic needle. If a patient comes to my office with a full stomach, and wishes me to administer chloroform, I decline. But under the same conditions, my preparation has no toxic effect. There is no ill effect except a little lightness in the head and a little reflex of the spinal column, but these soon pass off. I always have pellets of amyl nitrate or a little whisky on hand, or spirits of ammonia. I also keep coffee at hand, and sometimes give a patient a cup of it before sending him or her home. Nitroglycerin is also a fine heart stimulant. I have killed a dog with four grains of cocain on an empty stomach, and with from eleven to fourteen

grains on a full stomach. The formula is as follows :

Cocain hydrochlorate	14 gra.
Listerine	20 gtts.
Fleming's tincture of aconite	10 gtts.
Rose water	$\frac{1}{2}$ oz.

About 4 per cent. Cocain keeps indefinitely.

Dr. Hinman demonstrated a good method for keeping the mouth dry with the napkin. The first thing is to raise the lip and cover Steno's duct with cotton or bibulous paper. Then twist the napkin, begin about the middle of the lip and carry it back to the point desired and secure it in place with an ordinary molar clamp. By closely covering the opening of the principal salivary ducts with cotton or bibulous paper almost any mouth can be kept entirely dry for some time.

Dr. Crawford showed how, in many cases, teeth in the upper jaw could be filled without placing the rubber dam in contact with the parts. He places a piece of dam between two napkins, and carries it to place. This method has the additional advantages of reflecting light into the cavity and there is less liability of causing inflammation to the gum margin.

Dr. H. H. Johnson, in demonstrating the backing of a porcelain face, said: If the bite be close it can be obviated by grinding to a point, leaving almost a feather edge without showing any gold whatever; then grind from the point, leaving the tooth—side view—something in the shape of a diamond. With a piece of 36 gauge, 24 K. gold, make backing. This can be thoroughly adapted to the tooth. Trim the backing and carry it a little over the edge of the tooth at right angles. After properly adjusting the backing, remove it carefully and lay it on a piece of asbestos or charcoal, and flow 22 K. solder over it down to the pins, thickening to the required degree, and the work is done. Replace upon the tooth, and secure in place by splitting the pins, and flow solder again,

beginning with 22 K., and continue with 20 K. to any thickness desired, or use 22 K. throughout. To keep the porcelain from cracking, be sure to keep the borax from touching it. The investment should cover all surfaces except between the pins and cap below.

THE AMALGAM QUESTION AGAIN.

The May number of the *Dental Register* gives twenty-four pages directed against amalgam as a filling material, in which Dr. Chas. H. Taft, of Boston, after a lengthy dissertation by himself, presents letters from physicians and patients, all to demonstrate the pernicious influence of this material upon the general health. As a tooth-saving material the doctor in a few words repudiates amalgam, but the bent of the whole article is on constitutional lines, using the testimony of physicians as the base of his operations. Whatever, if any, part amalgam plays in the derangement of the constitutional equilibrium may some day be demonstrated, but certain it is that far too much of it is used in the teeth where gold is altogether indicated.

The doctor does not undertake to scientifically prove the injurious effects of amalgam, but uses the cases cited as sufficient evidence to sustain the points he makes. We quote below an extract from the paper, and also give a letter from a physician on the same line :

"But leaving out of the discussion all that might be said by those of us who differ as to the merits of amalgam as a filling material, there still remains to claim our attention the objection which physicians have to offer, to wit: that, because of the mercury which these fillings contain, they are found to be continually acting either as a direct poison to the patient or as an obstruction to the action of well-indicated medicines in the cure of the sick. This objection, if well founded, is a most important one,

and cannot be ignored by members of our profession.

"Experience has taught many physicians that it is often useless to attempt to cure a patient with a chronic disease until all amalgam fillings have been removed. Experience has taught the writer that it is useless to argue with a patient who is determined to follow the advice of the physician against the foolishness of having such work done. Experience has also proved to the writer that in a large percentage of cases the removal of amalgams has been followed by results eminently satisfactory to the physician and patient. It has proved that medicines have a much quicker and more permanent curative effect, and that patients go about among their friends telling the latter to what the cure of their troubles was due.

"Whenever interesting cases are reported at dental meetings where marked improvements in or cure of some chronic trouble has followed removal of amalgam fillings, the question is sure to be asked, 'Well, how do you *know* that the cure was due to removal of these fillings? You cannot prove that there is any free mercury in the system, and until you can demonstrate this fact in some scientific manner I will not believe that the amalgam fillings had anything to do with it.'

"It is, of course, impossible to present within the limits of a magazine article an exhaustive argument showing why amalgam fillings may often prove a source of evil. The most that can be done is to point the way to an intelligent method of reasoning to all who are willing to lay aside prejudice and to meet the objections to amalgam from a medical standpoint upon their merits, and to give some of the abundant testimony which the writer has received from both physicians and patients, and which speaks for itself."

CHICAGO, ILL., Oct. 3, 1897.

"DEAR DR TAFT:—Your favor of the

1st inst. requesting my views upon the effects of amalgam fillings has been received. Presuming that personal statements are of small value unless based upon demonstrable facts, I shall beg your indulgence and narrate a few cases from my private practice :

"Mrs. C., a woman of sturdy Massachusetts parentage, of exceptionally fine personal and family history, consulted me for a general physical breakdown. She was troubled with insomnia, nervousness, loss of appetite, and an almost intolerable neuralgia of the face and head. Her vision was considerably disturbed. The case having resisted the treatment of some noted specialists, I gave the case a most cautious prognosis. An examination revealed the presence of six or more amalgam fillings. These were removed, not without serious difficulty. A prompt and permanent cure followed. It is proper to say that some constitutional remedies were employed, but I do not credit them with more than a secondary influence in bringing about the cure. Before the removal of the mercurial fillings no medicine had given the slightest material benefit.

"This case is fairly representative of a score of others all coming within my personal knowledge, with the details of which I need not weary you by repeating at length. I have known exhausting facial neuralgias, sympathetic errors of vision, chronic ulceration of the mucous membrane of the mouth and various incurable symptoms of a constitutional character to disappear as if by magic upon the removal of the exciting cause, namely, one or more amalgam fillings."

Judging from the energy which Dr. Taft displays in this effort, we may look for a genuine war on amalgam from this standpoint, but the fact remains that, whereas in olden times, dentists would use a few filings from a silver dollar, and later would buy one-half ounce or one or two

ounces of prepared alloy, they now generally buy it by the four ounces, and many dealers make a specialty of selling it in packages of that size. If it is an evil it is a growing one, but a popular practice, and the man who stays the tide must do it by inventing a substitute which will supersede it as a permanent plastic filling.

ATKINSON.

[We call our associates' attention to the fact that Dr. Chas. H. Taft is a homeopath, of whom there are none in Spain nor west of the Rocky Mountains, because from these two places on the globe, mercury is obtained, and as they cannot destroy the mines, they won't live in the neighborhood of them. CATCHING.]

HYGIENE.

Vergil says of Æsculapius:

"Then Jove, incensed that man should rise
From darkness to the upper skies,
The leech that wrought such healing, hurled
With lightning down to Pluto's world."

Perhaps his daughter Hygeia met a similar fate, but the writers of ancient days failed to tell us about it.

A little serious thought and careful investigation teach us that nature's laws are correct and must not be violated except at great cost to the wayward.

Dr. W. B. Cheadle says: "A large proportion of diseases of early life, some of the most fatal and some of the most lasting in their influence have their origin in errors of diet"

Milk from the mother's breast is nature's food for an infant and is the ideal type. Whether it is obtainable in a normal state or in sufficient quantity is a question worthy the careful consideration of a practical physician. In a normal state it contains everything essential to perfect, healthy diet. Common errors are, giving cow's milk, which forms too much solid curd in the infant stomach, causing irritation, over-

taxing the muscular power of the stomach and deranging the nervous system. Vegetable products are also to be kept from infants or children prior to the eruption of the teeth, and all products under a state of fermentation or decomposition.

While the elementary constituents of food for the infant and adult are the same, the form and proportions vary. That element which is necessary to keep an organism alive is necessary in a larger proportion to form it.

Nature suggests the change of form. When the teeth are erupting and the salivary glands begin to excrete, the peristaltic action asserts its functions and a desire to bite is formed. Food of a more solid consistency should be provided, though let it be thoroughly understood that this change is to be gradual from liquid to solid, or the shock might impair the organs of digestion. We grow; we do not make sudden transformations.

Again, nature replaces the deciduous teeth with a more perfect set, assuring us further that a still more solid food is anticipated. The muscles of mastication are stronger, the excretions more abundant and the power to throw off extraneous matter greater.

The other essentials for health are sunlight, temperature, exercise, pure water, fresh air, and rest. The last not often neglected.

So long as we spend the entire time indoors, never allowing nature's antiseptic sunlight to strike us with its inspiring, cleansing rays, we may not expect to enjoy the healthy functions from the skin.

So long as we subject our bodies to the tortures of clothing that is only tolerated because "it's style"; so long as we continue to subject ourselves to the sudden transitions from a temperature of 100° to that of 30° and *vice versa*, we may not hope to escape rheumatics and lung affections.

So long as we put forth no physical

energy calling into play all the muscles of the body, weakness and atrophy, laziness and dyspepsia should not surprise us.

So long as we drink from questionable fountains or contaminated streams and are even less careful as to the water in which we bathe, we should not complain if infections come.

The animal and vegetable kingdoms have formed, according to nature, a great partnership whereby each is mutually dependent on the other. Both classes breathe. The carbonic acid gas which the animal exhales is inhaled by the vegetable. The oxygen the vegetable exhales is inhaled by the animal; thus is life maintained. So long as we are strangers to our partners and inhale noxious gases, we may not wonder that we are pale and anemic. Frequent visits to the woods will invigorate.

Finally, listen to nature, obey her laws, and let Hygeia reign again.

W. H. WEAVER.

NOTICE FROM SOUTHERN BRANCH.

Editor Dental Weekly.

Please direct the attention of the officers of the different State societies in the division known as "the South" to Standing Resolution 10 of the National Dental Association, which reads as follows:

"*Resolved*, That the secretary or other officer of each society sending delegates to this Association is expected to make a general report of the work done by the society it represents during the year, giving the subjects of the papers read before them and digests of the same, and to send said reports to the secretary of this Association at least three weeks before the date of each annual meeting."

The lack of information on the part of the main body of the profession in regard to the National Association and the Southern Branch, is so appalling that it has

been decided to have printed a small edition of the Constitution of the Southern Branch, as revised and adopted at St. Augustine.

I have by nature a great deal of patience, but some of the letters I receive are very trying. For instance one prominent member arraigns me for making a mistake in that I have used in my letter-heads the title "Southern Branch of the National Dental Association" in place of "Southern Dental Association," and suggests that I discard this paper and have printed another lot! Not having been present at St. Augustine, and evidently not having read your issue of March 10 (p. 326), he was not aware that the name used by me was that adopted in the revision of the Constitution. Just previous to the reception of that letter I was the recipient of a very caustic letter from another gentleman, saying that as a Branch of the National we were not acting fairly in using the old Constitution of the Southern Dental Association. Not having been present at the St. Augustine meeting, and not having read the issue of your journal referred to, he did not know that the constitution of the old Southern Association had been thoroughly revised, bringing it quite in harmony with the constitution of the National Association.

It was not intended to print the revised constitution until after the meeting at Omaha in view of possible changes that may be made at that meeting necessitating a further revision.

But there seems to be such a necessity for information and enlightenment that the committee has decided to distribute a limited edition of the constitution as revised and adopted at St. Augustine.

In the meantime I recommend a closer study of the Constitution of the National with which that of the Southern Branch harmonizes closely. Respectfully,

WM. ERNEST WALKER,
President S. Branch Nat. Den. Association,
Pass Christian, Miss., June 20, 1898.

AT LAST!

After long years of discussion in the various dental organizations throughout the country, the appointment of dental surgeons to the army has had a happy culmination in the final introduction of a bill in Congress looking to this end.

The honor of being the first to introduce such a measure belongs to Congressman Otey, of Virginia, the dear old State from whence have come so many champions of human rights.

The original text of the bill is as follows:

**A BILL TO ESTABLISH A DENTAL CORPS,
UNITED STATES ARMY.**

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there shall be an increase in the Medical Corps of the United States Army of a dental corps, to be composed of one surgeon dentist to each brigade with the rank of major, and one surgeon dentist to each regiment with rank of captain; provided, that each one of the foregoing dentists shall be graduates of reputable dental colleges and shall have been in full practice of dentistry continuously for the past five years.

"That the time of service, promotions, pay, allowances, retirements, and so forth, be governed by the rules now in force in the Medical Corps.

"That all supplies be furnished the dentists by the same board and in the same manner that supplies are furnished to the Medical Corps."

As it now stands the bill is not a perfect one. One serious omission we note is that the navy is not included as a beneficiary. This, doubtless, is an oversight, but one easily corrected.

Another objectionable feature *seems* to be the appointment of all majors and captains by the president. This is where the politician could get in his work. Brigade surgeons should have had at least ten years'

practice after graduation, and should be selected by the president for their well recognized ability either as *operators, oral surgeons and mechanical dentists*. Those in turn to constitute a board of examiners before whom applicants for regimental surgeons, with rank of captain, should apply for admission.

We would not be understood as criticizing in an offensive sense. On the contrary, we have simply pointed out what we conceive to be minor errors. If the bill in its present shape becomes a law, we shall be only too happy to hail it as a forerunner of something even better in the near future. As for Hon. Mr. Otey, he has the thanks and gratitude of the profession not only in America, but throughout the world, for his unselfish and patriotic attitude in furthering the efficiency of the National Guard.

It now becomes the duty of every dentist to rally to the support of this bill by writing to his immediate representative urging him to work and vote for its passage.

Do this at once without a moment's delay!

J. A. CHAPPLE.

To Repair Vulcanite.

To properly repair vulcanite, in my opinion, there is only one way to leave a neat-looking and substantial job.

Make your model, remove the teeth each side of break; take your saw and remove the palatine portion to within one-fourth inch of teeth; remove the glossy surface and roughen with chisel; wax up and invest in the usual way; separate, wash out the wax *clean*; with hot spatula burn small pieces of rubber to the old rubber; when packed vul. fifty minutes, cool, clean up, and when finished you have a neat and substantial repair. If the plate was a little loose make a bead across the posterior boarder of plate.

KEITH.

Rhineland, Wis.

Have you made as much out of yourself as could have been made out of you?

The Tennessee Meeting.

From the bill of fare sent out, our Tennessee friends will have a royal feast at Lookout Mountain, July 5th.

The subject-matter of the papers to be read and clinics had, are real, live questions of the hour, and those fellows know how to handle them, too.

We are told that Crawford, Beach, Cook, Gray, Morgan, Richards, Mewborn, Noel, Brabson, White and others, will attend. That settles it! No such aggregation under one canvas can be construed as a Quaker meeting.

Therefore, if you have fallen from grace, backslidden or degenerated into a chronic dyspeptic, go up and mix with these jolly good fellows and they'll put a few thoughts into your head and take a kink or two out of your hide.

CHAPPLE.

Two Thoughts.

It is a well recognized fact, that during periods of national excitement, such as are incident to war, the general health of the non-combatants is comparatively good and mortality greatly lessened.

If dental caries is largely the result of neurotic influences, as many believe, we may naturally expect a temporary suspension of the ravages of decay pending the Hispano-American war?

When dental surgeons become fixtures in the army and navy, what a wonderful medium that will be for the compiling of statistical data! Give it a moment's thought and you will appreciate at once the practical possibilities to accrue therefrom.

J. A. C.

On account of the Veterans' reunion, to be held here July 20th, it would be well for the South Carolina Dental Society to change its time of meeting, which is the same date as the reunion.

Treating Fissures in Soft Teeth.

Dr. S. G. Perry says, for many years it has been his habit with soft teeth that are just erupting, to wash out the fissures and put a pat of oxyphosphate in them, even if they are not softened at all. If they are dried out the filling will usually stay, even if no cutting has to be done. This serves as a protection while the gums lie over the ends of the teeth, and while they are still unused in mastication. When the tooth gets well through, and is antagonized and used, the danger of softening of the fissure is greatly lessened. When the upper molars are through they are treated in the same way.

Simple Band Matrix.

Cut a piece of German silver polishing strip long enough to go around the tooth, punch a hole in each end. Get a key-ring, of the kind with abutting ends, and file the ends to points to fit the holes in the strip; pass the strip around the tooth, open the ring with clamp forceps, insert the points in the holes in the band, let the ring spring back, which will tighten the band around the tooth and hold it in position.

DR. J. F. STEELE.

Estherville, Iowa.

For Acute Colic.

For the acute colic so frequently met with, resulting from indiscretion in diet, try the following:

R Chloroformi dr. jss.
Tr. opii deodorat dr. j.
Camphoræ grs. xv.
Ol. cajaputi dr. j.
Aquæ q. s. ad. oz. ij.

M. Sig. Tea-spoonful every hour or two.—
Med. Record.

A two per cent. solution of formalin in alcohol will disinfect instruments. They can be laid away wet without rusting.

L. VAN ORDEN.

San Francisco.

THE
American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Subscription \$2.00 per year; \$1.00 for six months—including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited. The editor is not responsible for the opinions of contributors. Advertising rates sent on request.

Atlanta, June 30, 1898.

Fads and Faddists.

That the professions have fads is not unknown to many. The subdivisions of medicine and surgery will "fad" a thing and run it for all it is worth for a while, then there comes an apparent reaction, and the pendulum swings almost as far the other way. It is right hard to retain an equipoise during such times, and few, comparatively, do so. Almost every individual dentist has a fad of some kind, and at times one or more are brought prominently before the profession. Prominent men, and journals as well, will take hold of them, and for a while scarcely anything else is heard but the fadded thing. Sometimes good results come from fads. If in no other way, they cause some people to think, which act will cause the promulgation of an idea or thought that leads to good and lasting results.

Again, fads, when they have run their course, teach by experience, and such lessons are not easily forgotten; but the inves-

tigation put forth by some who are carried with the whirl and stranded on the shore of despair often points the way out of a danger to others, and to a more reasonable procedure. As an illustration, the putting into active and indiscriminate practice, a few years back, by the medical profession, that part of the Mosaic law relating to circumcision. It was merely a fad for a while, but to the thoughtful and reasoning, the benefits in a majority of cases changed a fad to an absolute necessity.

To do something new often leads the young and inexperienced into the fadding of methods which often are valuable, but which require mature judgment for their proper execution.

How perfectly familiar the copper-amalgam fad is to the reader! It required the greatest amount of conservatism to withstand the onslaughts of this, the fad of fads. Then there came the "Herbst method," when manufacturers put thousands of dollars into the new instruments that were required to practice this fad. The journals teemed with it, the societies gloated over it; only occasionally would be heard the well-poised warning against it. Everything seemed to be pell-mell, all going Herbstward. Where now is the method and the instruments?

Then came cataphoresis. Factories were putting out the best machines all over the country, every man who had used it rushed into print and before societies. Now one of the leaders says he thought he knew something about it, but finds, after *experience*, that he does not, and declares that the perfect machine has yet to be made.

The results of cataphoresis are sometimes wonderful, and sometimes disastrous. It requires the thinking, conservative man—the one who neither rushes into print nor before the society—to get out of it what there is in it. The impetuous fellow, who takes one fad to-day and casts it away for another to-morrow, is ready to stand and

declare that there is nothing in cataphoresis, while the equipoised man is obtaining from it reasonably good results.

The Frenchman, with all of his enthusiasm, sent word that salol was *the* root-filling material. The faddists rushed in and sang its praise aloud, the echoes reverberating from shore back to shore. The man of equipoise stood still, and can now say with truth, "I told you so."

And so it will be till time is no more. The faddist will stand forth; he will find followers, because but few people stop to think and to reason about a thing.

Crown and bridge-work came along. Whoop! hurrah! The yell was raised, a mad rush was made, the equipoised were knocked out of the way as so much rubbish, and on they went. Now see them and hear them say, "It's a good thing, but will not do for all cases; judgment must be exercised in its use."

After all, the equipoised man is the one who stands at the helm, and to him we must always look for a safe landing.

Two Ways.

Here is the way, says the *Atlantic Medical Weekly*, a physician on the convention floor of the American Medical Association told about a patient coming to pay a bill:

"One day my office boy reported to me in my private office that there was a gentleman in my reception-room who wished to pay a bill which my secretary had sent him some time previous."

The above analyzed, means:

1. That the physician kept an office boy.
2. That he had a private office.
3. That he had a reception-room.
4. That he employed a secretary.
5. That he was a d——n fool.

That is one way of saying a thing in conventions, so as to stick on the agony as thick as possible. Here is the other and right way to state such a case, but fools won't learn it.

"A gentleman called to pay his bill."

It is rather restful to know that dental conventions do not contain all the fools—the quack professionals.

We have heard a quack professional dentist say: "I was called upon, in my office, a few days since by Mr. Bigdollar, who is the wealthiest man in town, and who lives in the finest house on Silk Stocking Row, and who keeps the finest team of any one, who is a regular patron of mine, having been sent to me by Judge Lookwise, who, you know, is the finest jurist in the State; and who married Miss Grecian Von Bender, for whom I have been operating a long time, and who thinks so much of my services that she has sent me General Whackaway, who by-the-by, is a most elegant gentleman, and I have invited him to become a member of our club."

The ink-well is dry, we can't continue. But, oh! how disgusting such is. To hear some talk, they never operate for any but bankers, generals, and retired capitalists.

It Was a Success.

The plan of conducting the clinics at the recent Georgia State meeting was a success, and as we predicted or rather expressed the hope, in our brief account of it, clinics hereafter should be given in no other way.

Dr. E. P. Beadles, of Virginia, in the *Cormos* of '97, outlined and urged this method and endeavored to have it practically carried out at St. Augustine, but for some reason failed of the co-operation of those in charge of the clinics.

The plan took firm root in Georgia, and will no doubt be observed in all future meetings.

J. A. C.

We are sending four consecutive sample copies to some of our friends. At the end of the time we believe they will become so interested in receiving a dental journal weekly, that they will order it to be continued indefinitely.

Unique Professional Beginning.

Strong characters come sometimes from small beginnings. This is surely illustrated in the following sketch of Dr. S. B. Palmer's professional life, which we take from the *Dominion Dental Journal*:

"Dr. Palmer was born in 1822. In 1847 he worked on the farm where he was born, about three miles from the nearest village, where he availed himself of the common school advantages, and afterwards entered the academy. The circumstances which led him to choose dentistry as a profession were unique and suggestive of his character. He needed artificial teeth. He had never seen a dentist, excepting the itinerant, whose chief business was extracting. Knowing a neighbor who wore a silver plate, he examined it and went to Syracuse, where in a druggist's a dental depot was kept, and inquired for some works on dentistry. The only one he found was 'Goddard on the Human Teeth,' published in 1844, but the price, five dollars, deterred him from immediate purchase. After a while he had saved the money, bought the book—which he still retains as a valuable memento—and started to study it, with the single object of making a plate for himself. Following the illustrated instructions for the manufacture of a narrow metal plate with clasps, he reduced a silver half-dollar to the right gauge on an anvil. With the aid of the drug clerk he selected the necessary plain teeth, and in about seven months afterwards, after various vicissitudes, he had the set of nine teeth fitted and finished by himself, quite equal to anything of the kind that could be made to-day."

We are pleased to announce Dr. T. P. Hinman, of this city, as a coeditor of THE WEEKLY. Those who do not know Dr. Hinman will know him.

Benjamin Franklin said an investment in knowledge always pays the best interest.

Dentists in Army and Navy.

Editor of the American Dental Weekly:

I think it of the utmost importance to our soldiers in the field to have the services of skilled dental surgeons, and shall act promptly on your suggestion to inform our representative in Congress my reasons for such a bill.

Those of the dental profession that served on either side of our late war know how bungling they were served when the teeth were at fault, and the soldier was lucky that lost only one tooth from *sensitive dentine*, when he applied to his regimental surgeon for relief from an aching molar.

I surely would have died from abscess of maxillary sinus during the war, if I had not fell into the hands of a skillful dentist in a town where I had been sent as unfit for duty. "Neuralgia from exposure," was my ailment on hospital record.

All dentists know that not one in a hundred of physicians know a solitary thing in regard to teeth and the many diseases associated therewith. Truly yours,

G. M. WILLIAMS.

Maysville, Ky.

Consumption Cure.

We have all read of Dr. Murphy's treatment for pulmonary tuberculosis. Here is a most concise statement of his method taken from an editorial in the *New York Medical Journal*, June 25:

The recent address of Dr. Murphy, of Chicago, before the Section of Surgery of the American Medical Association was a most notable contribution to the subject of pulmonary surgery. The address was read only in abstract, and it is to but one feature of it that we are now going to call attention, namely, the part relating to the treatment of tuberculous disease of the lung by compression of the organ. As we understand the matter, Dr. Murphy proceeds

upon the assumption that a tuberculous lesion of the lung, like one of a joint, for example, may ordinarily be healed quite readily by securing immobility, functional rest, of the affected part. In pursuance of this idea he immobilizes the lung by compressing it, crowding it back upon its hilum, establishing a sort of artificial atelectasis. This he accomplishes by injecting a quantity of nitrogen into the pleural sac. Nitrogen, he finds, neither exerts any untoward effect upon the pleura nor is absorbed to any appreciable extent; it simply keeps the pleura distended and the pulmonary tissue compressed. It is said that during the continuance of this compression the patient feels remarkably free from the symptoms that had previously preyed upon him.

The gas is allowed to remain in the pleura for a period of several weeks, and then it is withdrawn. In a goodly number of instances the symptoms do not return, and the inference is drawn that the disease has been overcome. The lung again becomes aerated and expands almost if not quite to its normal size. If, on the removal of the nitrogen, the morbid symptoms return, more of the gas is thrown into the pleura and kept imprisoned there for another term of weeks. It is said that this second injection is by no means always found necessary, and that when it is called for it almost invariably suffices for the cure of the disease in that lung. Then the other lung is treated in the same way.

Dental surgery is now represented in the General Council of Medical Education and Registration of England. The Crown nominated Mr. Charles S. Tomes, F.R.S., F.R.C.S., L.D.S., for the position. He was elected for five years. This is the first time that a dental surgeon has held a position in the Council.

Try the inhalation of vinegar for vomiting after anesthesia.

Cheek vs. Nerve.

"It's idiotic to use the words 'cheek' and 'nerve' as if they meant the same. Cheek is no more nerve than beauty is brain. A man may have both, but it's not usual. Cheek is active. Nerve is passive. Cheek needs a mouth. Nerve very seldom uses one, and then only to shut it. Cheek talks and acts. Nerve thinks, waits and achieves. Cheek is sometimes admirable in its ends, but is usually offensive in its means. Nerve is never offensive. Don't ever think a man necessarily lacks nerve just because he doesn't ask for what he wants. His forbearance may be the best proof of his nerve. A cheeky man compares with a nervy one as a sprinter of a hundred yards' dash compares with a twenty-mile-go as-you-please runner. Cheek is sometimes a blessing and sometimes a curse. Nerve is always a blessing. In these days, when 'faking' is a fine art, cheek has a better chance to win financial success than nerve has, I think. But, though nerve may die poor, it probably dies happy."—*Penny Magazine*.

The Tri-State Meeting.

This idea was frequently agitated at the recent Georgia meeting and would have assumed tangible shape but for the consideration of important society business. The consensus of opinion was in favor of such a scheme, and we take the liberty to invite our immediate sister States to consider the proposition, assuring them that Georgia will gladly cooperate with them.

J. A. C.

An Aid in Cylinder Filling.

Dr. L. C. F. Hugo, in making non-cohesive cylinder fillings, uses a small rubber pellet, which is pressed down on the first cylinders placed in the cavity; pressure is made on the bit of rubber, which carries the gold closely and firmly to its place.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., JULY 7, 1898.

NO. 43.

A BILL BEFORE CONGRESS.

The following is the bill now before the Senate and House committees, relating to patents in dentistry.

Write to your congressmen and senators and urge them to support the bill. Write to one or more of the committeemen named below, who are considering the measure, urging them to report favorably.

Say, doctor; this matter is your personal business, so throw off your indifference and act for the interest of the profession and the public. Don't act in "a public and profession be damned" way. Read the bill and write.

If this becomes a law it will stop the patenting of methods of treating oral lesions. It does not prevent the patenting of mechanical devices or appliances. It's a good thing. Let's do our best for its passage.

THE BILL.

Amending the statutes relating to patents, relieving medical and dental practitioners from unjust burdens imposed by patentees holding patents covering methods and devices for treating human diseases, ailments and disabilities.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress Assembled, That section forty-eight hundred and eighty-six of the Revised Statutes be, and the same hereby is, amended by adding thereto the following paragraph:

"But no patent shall be granted upon any art of treating human disease, or ail-

ment, or disability, or upon any device adapted to be used in the treatment of human disease or disability, or attached to the human body and used as a substitute for any lost part thereof, or upon any art of making such device, unless such device is adapted to be put on the market and sold substantially complete and ready for use or attachment," so that such section shall read as follows:

Sec. 4886. Any person who has invented or discovered any new and useful art, machine, manufacture or composition of matter, or any new and useful improvement thereof, not known or used by others in this country before his invention or discovery thereof, and not patented or described in any printed publication in this or any foreign country before his invention or discovery thereof, or more than two years prior to his application, and not in public use or on sale in this country for more than two years prior to his application, unless the same is proved to have been abandoned, may, upon payment of the fees required by law and other due proceedings had, obtain a patent therefor.

"But no patent shall be granted upon any art of treating human disease, or ailment, or disability, or upon any device adapted to be used in the treatment of human disease or disability, or attached to the human body and used as a substitute for any lost part thereof, or upon any art of making such device, unless such device is adapted to be put on the market and sold substantially complete and ready for use or attachment."

Sec. 2. That section forty-nine hundred and twenty-one of the Revised Statutes be, and the same hereby is, amended by adding thereto the following paragraph :

"Nor shall any suit or action be maintained for the infringement of any patent for an art of treating human disease, or ailment, or disability, or for any patent for any device adapted to be used in the treatment of human disability, ailment, or disease, or attached to the human body and used as a substitute for a lost part thereof, or an art of making such device, unless it appears that such device can be made and put on the market substantially complete and ready for use or attachment," so that said section shall read as follows :

"Sec. 4921. That the several courts vested with jurisdiction of cases arising under the patent laws shall have power to grant injunctions according to the course and principles of courts of equity, to prevent the violation of any right secured by patent, on such terms as the court may deem reasonable; and upon a decree being rendered in any such case for an infringement the complainant shall be entitled to recover, in addition to the profits to be accounted for by the defendant, the damages the complainant has sustained thereby; and the court shall assess the same or cause the same to be assessed under its direction. And the court shall have the same power to increase such damages, in its discretion, as is given to increase the damages found by verdicts in actions in the nature of actions of trespass upon the case.

"But in any suit or action brought for the infringement of any patent there shall be no recovery of profits or damages for any infringement committed more than six years before the filing of the bill of complaints or the issuing of the writ in such suit or action, and this provision shall apply to existing causes of action.

"Nor shall any suit or action be maintained for the infringement of any patent

for an art of treating human disease, or ailment, or disability, or for any patent for any device adapted to be used in the treatment of human disability, ailment or disease, or attached to the human body and used as a substitute for a lost part thereof, or an art of making such device, unless it appears that such device can be made and put on the market substantially complete and ready for use or attachment."

Sec. 3. That this act shall take effect immediately upon its passage, but the paragraph added to section forty-eight hundred and eighty-six shall not be held to apply to any application for patent filed prior to the passage hereof nor to patents granted upon applications filed prior to said date; nor shall the amendment to section forty-nine hundred and twenty-one affect the rights of action that may have accrued prior to the passage thereof.

SENATE PATENT COMMITTEE.

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Do you use diluted sulphuric acid to open and to enlarge canals? If not, why not?

RAPID BREATHING VS. CATAPHORESIS.

Dr. Bonwill's rapid breathing process for producing analgesia is well known, and though introduced many years ago, has found few advocates, perhaps none of enthusiasm, outside of the doctor himself. But Dr. Bonwill has made his impress upon the dental world, and his practical genius has sparkled before the profession for near a half century. It may be that his discovery on this line will meet more favor when time shall lay low those agencies which rise as a fad and go down as a failure, or perhaps having real merit in them, obtain for a season and then sink to let a new one rise, which must run its course and then repair also to oblivion.

Dr. Bonwill's faith in his discovery has never faltered, and to-day he adheres to it with the same enthusiasm that marked the beginning of its career, and not only that, but he disputes absolutely the utility of cataphoresis as an obtunder of dentine. His reasoning against osmosis through dentine will hardly hold against recent cataphoric demonstrations, but it is well for the reader to see what he says and will prove interesting. We take it from the *Dental Register*, and give the extract in his language :

"Osmosis, according to the best authorities, can only take place between two fluids of dissimilar natures or densities or gravities, where a porous membrane of tissue intervenes, or where a porous porcelain cup is used, as where salt of different specific gravity is used on either side of a porous membrane, when the fluids will in a short time, without any electricity, become of the same strength or gravity; or, in a Bunsen battery, where the porous porcelain cup that holds the bichromate solution, or nitric acid, and the glass or outer cup holding the sulphuric acid solution of 1 to 12, when the current is passed, what effect is produced on the liquids and what becomes of the bichromate

or sulphuric acid? Do they pass around through the galvanic apparatus or coil and through the interrupter? You know this cannot be. They are simply neutralized and lose their power to produce an electric current. How can copper be carried through a porous cup and be deposited upon the opposite pole? How can you take the fluid containing cocain and pass it through a membrane that is not porous? Dentine is porous only when the tooth has been extracted and dried and is void of all organic matter. So long as it is in the mouth it is full of fluid that is not interchangeable by osmosis, unless you can produce in the pulp chamber and canal a different density to the fluids in the peridontium. If equilibrium exist between this medium of dentine on either side of it, then there is a *statu quo* condition and no osmosis. You might as well tell me that a cup can be made of dentine to take the place of the ordinary porous porcelain or burnt clay cup in a Bunsen battery.

"It is well to try to alleviate pain in any operation, but when all this can be done without it, and the patient is enabled to see that dentistry is not the inhuman thing dentists would have them conceive, and have them feel and know that they can be taught to bear all the pain consequent upon any operation upon the teeth, in excavating or removing pulp why should you not adopt means long ago in your grasp.

From the many experiments of others in electro-therapeutics, as far back as 1860, osmosis was proven to take place by a current of electricity through a porous membrane or diaphragm, but never through bone, either in the living or dead subject; and even when the osmosis was effected through a porous animal structure or membrane or porous cup, it was only done after many hours. Teeth were extracted by electricity, in this city, as early as 1859, perhaps 1856, but it was only by the shock produced at the instant the forceps were applied and which produced a diversion of

the will force, by causing a sudden and violent inhalation into the lungs, and while the lungs remained inflated, the effect was good, for the senses were for the instant submerged or subjugated."

"I had learned the use of chloroform and ether from my father, and particularly from an M.D. who was exploiting these new agents and also had a galvanic battery. At that time (1856) it was not known that chloroform had any other than an anesthetic effect. It was not discovered that it could be taken to a degree in quantity to produce what is now known as analgesia.

You will now see the first dawning in my mind of the nature of these annihilators of pain, for the application was first made upon myself, and was administered by myself, which led to the discovery that chloroform could be taken to that extent that I could excavate my own carious cavities without pain and yet be sensible of the sense of touch and ability to perform the operation upon myself. It was an amazing thing to find that while the sensitive dentine was so obtunded that I could cut it with impunity, yet the special senses of hearing and touch were exaggerated. The excavator seemed to me as large as a hoe and the cavity as capacious as a bushel basket. There was no pain and my will senses was not subjugated; only the voluntary mind had been partially annulled. I could scarcely believe my own senses. Yet several separate trials convinced me that I had discovered a new property, or rather phenomenon—the analgesic effects of ether, and especially of chloroform.

Chloroform, while it would do what I wanted, would make my patients too sick, and I had to abandon its use.

It was then that the battery, for extractions alone, was first brought out in Philadelphia. I mentioned above the philosophy of shock in its action on respiration, and soon had it exemplified to the satisfaction of the patient that, while electricity would annul pain in dentine, and living pulps (if not

inflamed) could be removed, yet the too strong application of the current gave the patient such a severe shock while excavating that a violent inspiration led me to exclaim, 'Nature's anesthetic!' and I then saw it was diversion of the will-power, for when the lungs were being inflated so violently, the will could not take cognizance of actual pain. It was for the instant complete. Let any of you hurt a finger, and how soon it is put in the mouth and a violent inhalation taken several times until pain is relieved. The infant, in crying violently while in pain from an accident, is relieved and falls to sleep from the constant sobbing and increased inspiration. All temporary teeth, I extracted by this one sudden inhalation, or diversion of the will, without a tear or complaint. Two or three can be extracted while the breath is held in the lungs.

This led to the discovery that rapid breathing for sixty to ninety seconds, at the rate of 100 to the minute, would produce such an obtundity of the nerves and nerve centers that analgesia would be produced and the patient still be conscious of touch. This enabled me to perform all cases of excavating—extracting both teeth and the pulp, as well as all minor operations in surgery. A single respiration quickly taken, and the breath held in the lungs, will suffice for many trifling operations, and all that is needed in extracting the temporary and permanent teeth of children. This was the birth of analgesia, in 1856, as proven upon my own person while operating upon myself.

This property of all anesthetics is very little known by medical men, and they have missed a very important part of anesthesia. Analgesia should be better understood, and the application of rapid respiration would come into use in thousands of minor cases of operations where the custom is to completely anesthetize the subject. Let surgeons and dentists learn how to produce this effect, and ether, chloroform and gas would

no longer be used in three-fourths of the cases. In many cases of midwifery it is all that is desirable.

Let any one imagine that they are blowing a fire to make it blaze, taking full inhalations and forcibly ejecting or blowing, which can be done at least 100 times per minute, and while the patient is doing this the operator should talk to him—say no pain will be produced, and urging him to breathe in this manner until sixty seconds have passed, when the patient cannot feel any pain, as the voluntary system is subdued. The pneumogastric nerve now says, You cannot go on, as life would become extinct. For the next three minutes the respiration is only about six to the minute, showing the blood has been overoxygenated. The patient has to be urged to breathe. When this is done previous to using ether or chloroform only one-half the quantity is used, the effect is more profound, and there is not as much danger. Since this discovery of the rapid-breathing method, in 1872, although analgesia was discovered by me in 1856, and was the stepping-stone thereto, I have used no other means of painless surgery in dentistry.

Cataphoresis is not a fact as applied to sensitive dentine, and should have no place in dentistry.

You now know why I abandoned electricity for obtunding sensitive dentine and extracting; for this revelation of how nature relieves, gave me the clue to a brighter step, which dentists have been slow to recognize as a fact. Had they done so, then you would not to-day be looking for any other agent in most of the cases it is our lot to have."

ATKINSON.

Dr. Schultz, of Kansas, says celluloid makes the very best matrix for cement filling; that the surface in contact with the matrix will be perfectly polished and finished when the matrix is removed. Thin sheets of celluloid can be had of photographers.

LEAVE OPEN THE POCKETS.

On page 496, No. 40, AMERICAN DENTAL WEEKLY, appears a paragraph under the heading "Seal up the Pockets," over the initials H. H. J., criticizing Dr. Adair's theory and practice of closing pockets in treating pyorrhea alveolaris, but says, "if this could be done and thoroughly accomplished, certainly a step in the right direction would be taken," and further on says, "The inability to seal these pockets has proven one of the greatest drawbacks to our treatment in pyorrhea." I heartily endorse the position taken by H. H. J., as to the worthlessness of glycerine and tannin for pocket packing and closure, but must join issue with him in regard to the necessity for closing the pockets for effective treatment, and must question the correctness of his assertion that "inability to seal pockets is a drawback to successful treatment of the disease." To close the pockets effectively is something that cannot be done, either with medicaments or surgical appliances. The lamented Dr. W. H. Atkinson advised and discussed such procedure and created sensation on the subject some years ago, but never to the day of his death did he inform any one how it could be done.

Theory and practice are not always agreed and often fail to combine favorably.

I hold that an *impossibility* in surgery should not be considered or in any way held accountable for failure in treatment and cure of any disease that is amenable to surgical treatment, as in the case of pyorrhea. Certain things will do to mention and sometimes discuss for sensational effect, but to attempt to utilize for beneficial results, would be time lost and no profit to any one. The less we have to do with impracticals, the better will be results.

For success in treatment of pyorrhea, it is all important the pockets should be left open. I so proclaim from observation of results, realized in practice during long years of experience in treatment of the disease.

Experience is our best teacher, and when sustained by satisfactory results in daily practice must be repeated and given preference over speculative theory.

When all deposits on the roots of teeth have been removed and remedies applied locally to soft tissues, all that is necessary for speedy cure in a large majority of cases, is the free use of tooth-brush with a reasonable quantity of water in the mouth several times daily, immediately after each meal and on retiring at night, also the forcible application of finger pressure on all parts of the gums for eight or ten days after operation for removal of deposits. The soft tissues will resume a normal state without the application of agencies, antiseptic disinfectants electro-medication, etc., as microbe-destroyers, or the *closing of pockets*.

The gums will contract and fit closely around the roots of the teeth, but the periodontal membrane destroyed by the disease can never be restored by new growth and made to unite to the cementum; therefore, the imperative necessity for frequent daily use of tooth-brush and finger pressure to tone up and strengthen gum tissue, and prevent impaction of food substance between teeth and gums during process of mastication.

It is doubtless the neglect of such practice coupled with failure of *thorough removal* of deposits, with results following, that causes many dentists to contend that the disease is incurable.

From one to two weeks is the limit of time requisite for cure in a large majority of cases. Leave the pockets open and use freely brush, water and finger pressure as above suggested, until nature can assert her power, having been aided, and all will be right.

With pyorrhea alveolaris, as with other diseases, in effort to restore to a normal state the less done the better, so it is on a right line, proves effective and produces results desired.

B. F. A.

PRACTICAL SUGGESTIONS.

The following practical suggestions we take from the *British Journal of Dental Science*:

It seems a very simple thing to back a tooth, but it is a process which really requires great care if the best results are to be obtained. The backing should lie perfectly dead all over the tooth, and the holes through which the pins pass should not be too large. If there is any space between the sides of the pins and the plate, the borax and solder will run between, and the tooth is liable to fracture. The pins should be bent from the free end, and only one pin bent at once. Bend them side by side, and parallel to the cutting edge of the tooth; there is no need to rivet them, but they may be filed down a little before soldering.

Great care ought to be taken to prevent the borax from getting between the tooth and the backing, or on the cutting edge of the tooth. The borax sticks to the tooth, and if one grinds it off it generally chips away and brings a piece of the tooth with it. If the borax is allowed to get on the tooth it very often results in small cracks running down the tooth. See that the teeth are quite clean before investing; if hard wax is allowed to remain on, the tooth will discolor when soldering. It is better to scald the plate with hot water, when invested, to remove the wax and make everything quite clean. Before investing a slight space must be made between the teeth to allow for the contraction of the solder, which is inclined to bring the teeth inwards, and if the teeth are touching before investing the contraction often fractures them.

In preparing a plate for bands or wires one is apt occasionally to file out a little too much. Also, in restriking an old plate, a space is left between the plate and the band when fitted. If the space is very much a piece of plate ought to be fitted in when preparing the plate on the model, but if it is

not very much the piece may be fitted in when the case is invested.

The main point is to fill up the space, however small, with plate, and not with solder, otherwise the bands will draw away with the contraction of the solder, and consequently will not fit the teeth.

The same applies to soldering teeth the backings of which do not reach down to the plate.

In a plate case the plate ought to extend under the teeth, and the teeth ought to be fitted accurately to the plate. If there is a space between the bottom of the tooth and the plate the pins alone will have to stand the strain which is afterwards put on the tooth in mastication.

Never grind artificial teeth with a dry stone; if this is done small pieces are apt to chip out and small cracks appear at the neck of the tooth where it is ground. These are not noticeable sometimes, but if the tooth has to be soldered these cracks often extend and involve fracture of the tooth. It also happens sometimes when the tooth is vulcanized.

If it is desired to get an excellent model from an impression in which there are natural teeth, it may be done in this way: Mix the plaster a little thinner than usual and pour it in at the top of the palate, taking care that the plaster runs down the sides of the teeth and not over them; at the same time the impression must be tapped on the bench or basin in the usual way. After the plaster has covered the whole of the impression, invert it, and by several sharp jerks throw all the plaster out again into the basin. If the plaster is not too thick this will be readily done, and it will leave the impression with a very thin coating of plaster all over it. If the plaster has not run all over and into every corner, a few taps more will make it do so. Now let the plaster settle to the proper consistency, and fill in the impression in the usual way. When set, the teeth on the model will be found to

be perfect and free from bubbles. It will improve the hardness of the plaster if a pinch or two of alum is mixed with it, and it will also hasten its setting. It is also much better for vulcanizing on than a model in which salt has been used.

Models which have been heated, to be dipped in stearine or any other hardening agent, should be dipped while fairly hot. They should not be allowed to stand on the bench after once being heated, because they absorb the moisture out of the atmosphere. It is very injurious to them to heat them once or twice before dipping.

When models have been dipped they should not be placed in boiling water to remove wax. They should be gently and gradually heated in the bunsen flame, and the flame ought to be kept as much as possible on the wax and not allowed to burn the model.

When cutting off the projecting ends of the pins, which are put in to strengthen plaster teeth on models, hold the model very lightly with the left hand, and take hold of the pin with the cutting nippers. When actually the pin, the model should not be held at all with the left hand, but of course it must be placed immediately under to catch it when the pin is cut. If the model is held firmly with the left hand the tooth is liable to be split.

There are plate cases to be made for mouths in which there are many prominent roots standing, and very often the patients will not have the roots touched. In such cases, after taking the impression, fill in the roots with amalgam, and take care that the amalgam is left standing above the level of the surrounding composition, and a little roughened. Give the amalgam an hour or two to set and then cast the impression in the usual way. In such cases it will be found that the roots will not be easily rubbed down, which is very often the case when the model is cast all plaster.

This method is also useful when it is found convenient to make a crown to a model.

After soldering a plate case with teeth on, the investment may be quickly removed from it in this way. Invert it, and pour oil on to the back of the investment; this will make the investment quite rotten, and it may be easily removed from the plate. Plenty of oil must be used, and care taken in separating the investment from the plate, otherwise teeth or bands may be broken off. This method may be safely used after the red heat has disappeared, and it is a great saving of time when a patient is waiting for a repair.

In edentulous cases, or where there are very few teeth left in the mouth, it is often very difficult to get a correct bite. Get the patient to throw his head back and ask him to swallow. He is then bound to articulate the lower correctly with the upper. Repeat the process two or three times, and it will be seen that the patient will bite the same every time. The important point is to get the patient's head well back.

When an artificial tooth, which fits on to the natural gum, is broken off a plate, or when a natural tooth is broken off, and a new tooth is to be added to the plate, proceed in this way. We will take for instance, a case in which the incisors are left in the mouth, and the patient wears a plate for the back teeth. Supposing one of the centrals has broken off. Prepare the root if necessary, and with the plate in the mouth press a small quantity of composition or wax in the space, and carry it over at least one tooth on each side. When set, remove the plate and the small impression from the mouth together.

If necessary, the impression must now be waxed in position to the plate. Select a tooth to match the remaining teeth in the mouth, and the case may now be proceeded with in the work-room. Grease the plate slightly, and run in a small quantity of plaster when required,—there is no need to cover the whole of the palate. When the plaster is set, remove the impression by gently

heating it in the gas, or in hot water if it is a metal case; the plaster also will readily leave the plate. Now fit the tooth in the usual way, and prepare the plate either for vulcanizing or soldering as the case may be. If the tooth has to be vulcanized on, it is safer to do so on the small model for obvious reasons. By this method much time will be gained in the surgery, and the patient will be saved the trouble of having the tooth fitted to the mouth.

A very good and quick method of fastening the tooth on to a vulcanite case for temporary purposes is this: Prepare in the usual way as for vulcanizing a tooth on, but make quite sure that it is well dovetailed. Now melt a little fusible metal and pour in round the pins while the tooth is held in position by the finger. Smooth down with the finger end, and make it level with the surrounding parts. This method is very useful when there is plenty of room to get a good undercut.

The rattle of a full upper and lower case may be overcome somewhat by this method. Build up the case in the usual way in wax, but in packing, remove the four end molars and pack white rubber instead of the teeth. Thus, there will be four pads of softer material than the teeth, which, when they come in contact, will reduce the rattle.

Nocuous Effects of Formaldehyde.

Formaldehyde gas is not innocuous to animal life, as some have claimed.—(*New York Medical Journal*.) In a room where it had been used for disinfection, the flies were killed, also the bedbugs. So much to the credit of this agent. Dogs and cats, which were left in rooms so disinfected, were killed.

Request your patients to breathe through the nose, while operating for them. This will avoid your inhaling the offensive odors from diseased mouths and fauces.

THE
American Dental Weekly
 ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Subscription \$2.00 per year; \$1.00 for six months—Including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited. The editor is not responsible for the opinions of contributors. Advertising rates sent on request.

Atlanta, July 7, 1898.

Criticism.

"The criticism has been passed upon dental journals that they 'shoot over the heads of the average dentist'; the implication being that much that appears in their pages is beyond the comprehension of the ordinary practitioner."

The above is copied from an editorial in the June number of the *Dental Century*. Following that paragraph is a partial admission of its truth and a defense for the journals.

The editor of the *Century* is a kind-hearted man to deal thus lightly with those who would so cruelly charge the "average dentist."

Criticism is a mark of culture when its aim is to bring man nearer a state of perfection; but when its aim is to lower a standard or oppose growth, is a mark of ignorance that points to a head over which many "incomprehensible" things have

rolled, until it has become exceedingly sore.

Perhaps it would be wise for the journals to take no notice of such criticism as would tend to detract from their true worth. On the other hand, when a man realizes his own weakness there is hope for him.

Were the journals to publish only such matter as is known or easily comprehended there would be a disposition on the part of the "average dentist" to neglect further research.

Upon reading a scientific disquisition on a subject about which we are ignorant, the first impression should be the consciousness of being less informed than the author. The next, a resolution to acquaint ourselves with the facts concerning the discussion; and then, after the subject is mastered, commend the author if he is found to be right, or condemn his article if he is found to be wrong.

We are striving to find the truth and have its rays of light penetrate the dark corners. All know how painful it is to the eyes to rush from darkness into a well-lighted room. It is equally so when too much light is turned upon ignorance; for a time our mental vision is shocked, then tolerates, then loves the change.

We think the adverse criticism that called forth this short article is not a reflection upon any dental journal, but is very unjust to the "average dentist." After spending three years in a college and securing a State license and having the respect of his community, a dentist is not able to comprehend the reading-matter of our journals! Can he be an "average" man?

The editor of the *Century* speaks in the highest terms of those he would consider "average dentists." We have a better average in the South than the criticism would indicate. The North is equally well up. So, surely, the critic must have a large acquaintance in Spain!

W. H. WEAVER.

Premature.

The bill providing for dental surgeons in the army and navy was prematurely introduced. Congress needs to have the voice of the dental profession before it will see the necessity for such a measure. Even then, the Surgeon-General will turn it down if he can. He does not seem disposed in favor of it at all. Why, we cannot say, unless he fears his allowance might be cut down. Surely it can't be on account of extravagance, for whoever heard of an army officer objecting to expense if it did not affect him individually. It may be that Surgeon-General Sterneberg denies the right of dentists to such recognition. He can't be much wiser on this point than the majority of his profession, who are lamentably ignorant on dental matters. The failure of this bill should not deter us. We must get ready at Omaha for action, and for action in concert. We must show Uncle Sam that we mean what we say. Then he will listen respectfully.

The Hornets are Buzzing.

At the New Jersey meeting, to be held at Asbury Park, July 20-22, it is announced, in one of the most attractively gotten up programs that we have seen, that Chas. A. Meeker "will try to bleach a tooth by cataphoresis."

That "trying" business is certainly something new in a program. At clinics, it is often a "try," but not so announced beforehand. We are tempted, by that announcement to go to Asbury Park.

We learn, through a private letter from Dr. Geo. E. Hunt, editor of the *Indiana Dental Journal*, that the attendance at the tri-State meeting of the Ohio, Michigan and Indiana Societies numbered five hundred. Why can't Georgia, Alabama and Tennessee, or Georgia and the Carolinas, have such a meeting?

Practical Dentistry.

All dentists like the practical; for dentistry is mainly practical. Here are some points from the *Indiana Dental Journal* by Dr. Gentle. Read them, think of some of your own and send them to THE WEEKLY.

Coating the face of a Melotte metal die with vaseline will prevent the counter-die from fusing with the die.

A vaseline coating on the glass stoppers and the inside of the necks of varnish or preparation bottles, will admit of the bottles being easily opened and will keep them free from incrustations of varnish, etc.

In smoothing the surface of wax plates before investing, by the aid of a flame from a Bunsen burner or alcohol lamp, use a chip-blower to direct the flame instead of a blow-pipe—it is easier to control.

An easy method of removing gutta-percha points from root-canals is to roughen the point of an Evans root-canal drier, heat the bulb and pass the point slowly into the canal. Cool the bulb with a wet sponge, and on removing the point the gutta-percha will come with it.

To treat the root-canals of posterior teeth when the walls are broken down so badly that the rubber dam cannot be adjusted, proceed as follows: Prepare the tooth as for a permanent filling. Fill the pulp chamber with S. S. White dressing seal, allowing the filling to project from the pulp chamber as far as occlusion will permit. Build a wall of amalgam around this and at a subsequent sitting adjust the rubber dam, remove the seal and proceed with treatment.

To mend a plate temporarily where a tooth or a section has been broken off leaving the pins in the rubber, wash the exposed surfaces thoroughly with soap and water and then with chloroform. After drying thoroughly, coat the surfaces with a mixture of equal parts of gutta-percha and

resin, dissolved in chloroform, lay a thin piece of gutta-percha over the broken surface of the plate, heat over a spirit lamp and press the tooth or section to place.

Blazing the Way.

American Dental Weekly:

One year ago, when the subject of the place of meeting of the National Dental Association was discussed, I thought Denver a point too far west for the attendance of the eastern members, but since then I have found what little difference an extra day on a train makes in the transcontinental journey, and feel like subscribing to the suggestion that a meeting be held in San Francisco or Portland. The latter city has, in addition to all facilities for a convention, the additional advantage of a unique field for the sightseer. Personally I would feel repaid for the trip across the continent by the day of the journey which embraces the trip along the Columbia river and through the Blue and Cascade (well named) mountains. Curiously enough they are the most beautiful and wonderful features of that great State, Oregon, which have not been described in print.

It needs no special prophet to foretell that Portland will not only be a great city, but probably the city of the Pacific Coast, in the future. Frisco has the advantage of being cool in summer and the questionable feature of showing less regard for public morality than probably any other city in the Union. Truly yours,

HENRY H. BURCHARD.

Redlands, Cal.

It is stated on good authority the College of Physicians and Surgeons and the Baltimore College of Dental Surgery will consolidate. — *Maryland Medical Journal*.

If you intend going to Omaha last of August, and wish to go on a through sleeper from Atlanta, Chattanooga and Nashville, let THE WEEKLY know.

The Bill Failed.

Editor American Dental Weekly:

Apropos of your remarks in this week's issue in reference to dentists in the army and navy, I have a word to say. I was called to Washington last week to meet Dr. Buckley, of Chicago, who, having attended two years at the Naval Academy, volunteered his services to the United States Government as dentist. In spite of his indorsements the reply came, "No authority for such appointment." The doctor thought something might be done with Congress to make his appointment possible. On investigation he found a recent measure introduced by a junior representative from Virginia, at the instance of some dentist, had been reported unfavorably. This was done through the influence of the Surgeon-General.

It is perhaps unfortunate that this measure was ever introduced, as its failure will prevent the introduction of any similar measure during this session of Congress. This abortive effort has, however, made several things plain: (1) that any measure introduced must be an expression of the best thought of the profession; (2) it must receive the united and enthusiastic support of the same; (3) it must be placed in the hands of an experienced legislator.

When the measure is fairly launched during the next session of Congress, it will then be time for every man to use his personal influence with his representative, for unless we have a large majority of the law-makers prejudiced in favor of such legislation we will still have to reckon with the Surgeon-General. He said, in substance, that it would be entirely too expensive an experiment; many of the enlisted men having been without dental attention for years, the Government could not undertake to repair the ravages of such a length of time.

If we grant this, we still claim the necessity of skilful treatment for emergencies, especially in view of the fact that we have a

great number of men hurried to the front totally unprepared to battle with the effects of exposure and hard-tack. I have a report of two fractured bicusps and a necrosed lower jaw in one regiment, from my patients, and I did not work for many of the militia.

Now, Mr. Editor, if this fight is to be made and won, you must help; and if we are in earnest I don't think we can be whipped. I suggest a committee from the National to organize the profession until it has actual control of Congress, and that you editors dig and prod until it is an accomplished fact. This for our profession and for humanity.

Cordially,

B. HOLLY SMITH.

June 29th.

"As the Case May Be."

In reading a few days since from a writer in California, the following sentence occurred; "As you all know, amalgam shrinks or expands as the case may be." It is just such loose-jointed talk as this that does harm with the non-thinking class. "As you all know, amalgam shrinks or expands as the case may be!" What does he mean by "as the case may be"? In one tooth it will "expand," in another it will "shrink;" in one mouth it will "expand," in another it will "shrink"—"as the case may be." "As the case may be."

It is very common for the word ulcer to be used instead of abscess. While the English definition of ulcer might mean abscess by stretching one word to cover several conditions, still as we have two words, let them mean the two conditions.

W.

If you wish to go on the through sleeper from Atlanta to Omaha, via Nashville and St. Louis, write to THE WEEKLY. The requisite number for a through sleeper is eighteen. Remember, if you wish to be of this number, not to delay.

An Idiosyncrasy.

There lives a man in Lagrange, Ga., to whom wheat flour is a rank poison. He is about sixty years of age. He was never able to eat any food containing the slightest amount of flour, and anything like a poultice containing flour causes the surface to become very much inflamed, attended by excruciating pain. To be in a room where flour is handled so irritates the bronchi as to cause considerable suffering. He has been the victim of many incredulous jokers, who after seeing the effects, are too badly frightened and sympathetic to try the experiment a second time. W. H. W.

Just Common Sense.

The following clipping is agreeable because it is so full of common sense. We take it from the *Maryland Medical Journal*:

"The intense heat of summer has caused the usual large number of deaths among the poor children unable to battle against a combination of extreme heat and improper food. Physicians can aid this helpless class by recommending them for the free excursions, and by obtaining for them free ice and milk, and by using that modern style of medication which pays more attention to the diet and uses few drugs."

One of our Boston readers says that editorial on "Wake Up" was to the point.

We will shake the sleepy editors again and see if we can arouse them to action. The failure of the bill before Congress for dentists in the army and navy was in part due to editorial indifference. If the editors were wide awake, they would have the profession at large so informed and stirred that Congress would not so willingly turn us down. While the introduction of this bill was premature, so any will be, if we do not bestir ourselves. Won't you editors wake up?

The interludes of the "Symposium" were fine, Dr. Hunt.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., JULY 14, 1898.

NO. 44.

ELECTRICITY IN PULPLESS TEETH.

From the *Dental Register* we take the following, by Dr. Chas H. Rosenthal, showing his method of treating pulpless teeth with electricity:

THE TREATMENT OF PULPLESS TEETH.

"The method I am about to present, I desire to say, is an original one, and can, therefore, only give you the results of my own experience.

"Let us consider first some of the elementary principles employed:

ELECTRIC OSMOSIS, OR CATAPHORESIS AND ELECTROLYSIS.

"From a medical standpoint we understand by osmosis, or cataphoresis, the introduction of medicaments by means of electricity into the body through skin, mucous membrane, or teeth with enamel removed.

"Electrolysis, is the decomposition of chemical compounds of certain kinds, known as electrolytes. Chemical energy can be converted into electric energy, so does electric energy convert chemical energy. Where these two principles are used combinedly, they are known as 'metallic electricity'—the first, no doubt, being a mechanical force. The binary electrolytes, that is to say, compounds containing but two elements with an electro-positive and electro-negative, are easiest decomposed.

"The advantages of the employment of binary compounds in dental therapeutics is apparent, since it requires but a low amperage to decompose them. We have also to

deal with secondary reaction, chemical compounds formed by contact with other elements present for which they have a chemical affinity. The products of the decomposition are known as ions, respectively cathode and anode, depending upon their affinity for either upward or downward pole.

"Let us apply the principles of metallic electricity to the treatment of a pulpless tooth and note its therapeutical effect, taking, for instance, a putrid pulp, one where the canals are open, with no peridental membrane inflammation. We will start by carefully applying the rubber dam, being cautious to leave no contact with neighboring tissue. This done, thoroughly wash out the pulp-canal with a 6 per cent. hydrogen peroxide (H_2O_2) ridding the canal of much of the putrid tissue. A saturated solution of sodium chloride ($NaCl$) is now carried to the pulp-canal on a platinum electrode, using the positive pole of a galvanic current. (It is important that the electrode, be platinum on account of the secondary reaction consequent to the use of other metals.) Not more than one-fourth to one milliampere of current is necessary to decompose this binary compound; the decomposition commences at once.

"The secondary reaction at this point is important. We obtain as a result, not chlorine and sodium, but chlorine and hydrogen set free, because the sodium, primarily formed, decomposes the water H_2O , forming $NaHO$ (caustic soda). We have, therefore, not only the ion chlorine, with its powerful antiseptic effect in its nascent

state, but also the caustic soda as a detergent; by cataphoresis these products are carried completely through the tooth, reaching everything contained within the pulp-canal.

"The success of this treatment depends entirely upon the time it is allowed to remain in the tooth; germicides are only effective when allowed to remain in contact with germs sufficient time to destroy them, and so with this, it requires about twenty-five to thirty minutes to accomplish desired results.

"Removing the electrode, allowing whatever moisture present to remain, apply a two per cent. solution of nitrate of silver to the pulp-canal and there will be an immediate precipitate of chloride of silver by its contact with the remaining chloride; this insoluble salt is deposited to the apex of the tooth and serves as a root-canal filling. It is unnecessary to do anything further; the tooth can be filled at once. I have used this treatment in several hundred cases, extending over two years, with comparatively few failures, and those were recorded in my early experience, when I did not recognize the importance of leaving the application a sufficient time. Where there is an inflamed peridental membrane the pulp-canal should be opened up to afford drainage and allow the tooth to become free from soreness; that is to say, the membranes should be free from inflammation; an electric current takes the shortest course from anode to cathode, and, as a consequence, if there is any disturbance at the side of the root, it would not be reached by cataphoresis. The tooth once free from soreness, proceed as in the first instance. Of the cases where fistula is established, incidentally I wish to say, I can suggest no better method than the time-honored injection of carbolic acid through the root-canals."

We mourn with Dr. Chapple in the loss of his father, who was a loyal citizen, a kind father and a true man.

PRACTICAL SUGGESTIONS.

The following practical suggestions are from the *British Journal of Dental Science*.

When the case is built up in wax, with all the joints fitted, each ought to be taken off in turn, and all traces of wax and dirt removed from the joints. Then wax on again, but leave spaces opposite each joint, so that thin plaster, or osteo, or whatever is used, may be placed in the joint. The object is to keep the wax out of the joint entirely; finally wax up and put the case in the flask.

If a large quantity of vulcanite is unavoidable for a case in which there has been much absorption of the alveolus, we all know that the thick part will be porous when vulcanized. To avoid this, put in small pieces of vulcanite when packing the rubber, and get in as much as possible, especially in the middle of the thickness under the teeth. In some thick lower cases it is even safe to put in one or two long, thin diatoric teeth. Perhaps the pieces of vulcanite are the safest, because if they are met with, they may be filed down, and will scarcely show, if they are the same color as the new rubber.

When removing teeth from an old vulcanite case, put a little wax on when heating in the gas. This will soften the vulcanite and render removal of the teeth easy. Another method is to boil the plate in water until soft; this will do away with the unpleasant smells with which we are all familiar.

When zinc and lead have become mixed, make a cone-shaped mould in the sand and pour in the melted metal. When the zinc has set, lift out of the sand, and the lead, still melted, will remain at the bottom; or leave the whole mass to set, and cut off the lead afterwards.

For cleaning natural teeth, use a solution of Castile soap instead of water, or aromatic sulphuric acid. It is much better for the gums, and the irritation is not so great.

To remove the disagreeable odor of the hot air syringe, which comes from the methylated spirits in the lamp, occasionally pour into the bulb of the syringe a small quantity of oil of cloves, eucalyptus oil, or eau de cologne.

After a dressing or temporary gutta-percha has been taken from between teeth, the gum often bleeds a little. In mild cases of hemorrhage from this source, apply a pledget of cotton-wool dipped in strong carbolic acid, and then in tannic acid; if held firmly on to the bleeding gum for a short time, it usually arrests the hemorrhage. Glycerine and tannic answers the same purpose.

When using carbolized resin for covering an arsenic dressing or for any other purpose, use Fossiline, or any other kind of white filling powder with it. The best way is to have a little of the powder on the mixing-slab, and after dipping the cotton wool in the carbolized resin, roll it on to the powder and thoroughly incorporate the two. This will have a twofold effect; the carbolized resin will be prevented to some extent from washing out with the saliva, and the powder will also harden the dressing, thus ensuring less risk of its being disturbed in mastication.

This kind of dressing answers quite as well as temporary gutta-percha for many cases; it is easily applied, and it is much cheaper.

The following method is useful for gold filling in an incisor, in which the corner of the tooth is broken off, and it is impossible to get an apposing point. Prepare the tooth for filling in the ordinary way, either for wedging, or with retaining pits, then on the lingual wall cut out a small key or dove-tail, taking care that it is in the strongest part, not too near the cutting edge of the tooth, or too near the base of the cavity, which in either case would leave a weak part in the tooth. The part where the opposing point ought to be, need not be taken into

consideration in preparing the cavity. Then proceed to fill the base of the cavity in the usual way, and build the gold up to and into the key, finish and polish. The filling will be quite as firm and perfect as if it were filled by means of an opposing pit. The tooth ought to be strong enough to bear the cutting out of the key, otherwise it will soon come to grief, but in suitable cases the tooth and filling ought to last a long time.

Scratches and stone-marks on mouth mirrors may be removed by polishing them on a felt wheel on the lathe; use plenty of wet pumice-stone and plenty of pressure, but do not allow the mirror to get hot.

Perfect adhesion of gutta-percha to the walls of a cavity may be obtained by wiping out the cavity with copal-ether varnish, or chloroform.

Cement fillings ought to receive a coating of copal-ether before allowing the saliva to get to them.

When your smooth nerve-bristles get so smooth that cotton-wool will not stick to them, rub with sandpaper.

Insane people and vicious children often refuse to open their mouths. In such cases press a finger upwards under the floor of the mouth behind the angle of the lower jaw, where the inferior dental nerve enters the foramen. That will have the desired effect. Another way is to press the bottom lip with the thumb against the lower incisors until it causes pain, then push the lip over the teeth. If the patient closes his mouth he will bite his lip, although the thumb will intervene between his lip and the upper teeth. It is perhaps unnecessary to add that these extreme measures ought not to be used in cases of nervousness.

Save all your surplus amalgam and roll into small pellets of different sizes while soft. These will prove very useful subsequently, when filling large cavities by embedding them along with the soft amalgam. It reduces the tendency to shrink, which all amalgams have, and it is a saving of material.

DENTAL QUACKS AND ENGLISH LAW.

As a diversion, we reproduce from the *Dental Record*, London, the following case in court. It will be interesting to our readers. The English journals, almost monthly, chronicle such cases. What kind of a law is it that excludes all American dentists and yet permits such men as Mr. Stephens to practice?

FLETCHER VS. GOODMAN.

"At the Cardiff County Court, on Thursday, May 5th, before his Honor Judge Owen, the plaintiff, Mrs. Marion Fletcher, of Glamorgan Street, Canton, sued Messrs. Goodman & Co., who advertised themselves as dentists, of 56 Queen Street, Cardiff, for £50 as damages and compensation for personal injuries sustained by defendants' negligence. Mr. J. Sankey appeared for the plaintiff, and Mr. C. M. Bailhache for the defendants.

"At the outset Mr. Bailhache applied for an adjournment on the ground that one of the partners was prevented from attending through having dislocated his shoulder. Mr. Sankey opposed the application. The defendant's solicitor had intimated his intention of applying for an adjournment, as he would be professionally engaged elsewhere on the court day. On being informed that this application would be opposed, he then intimated that one of the partners had dislocated his shoulder. The judge declined to grant the application, and Mr. Bailhache then withdrew from the case.

"Mr. Sankey having opened the case, the plaintiff was called, and incidentally mentioned that the man who had operated upon her teeth at Goodman's was in court. Witness pointed him out.

"The person, who in answer to the judge said his name was Stephens, admitted that he was the individual referred to.

"The judge, with this knowledge before him, said a more impudent attempt to postpone a trial he had never heard. He, of

course, entirely accepted Mr. Bailhache's explanation that he was only acting on instructions.

"Witness bore out counsel's opening statement, and continuing said that the man Stephens, after looking at her mouth, pronounced it to be in a very bad state, and said her mouth was of the shape which rendered a five-guinea set necessary. The following day she revisited the surgery. Stephens told her that he could cut the teeth off and fit new ones on to the top. In reply to a suggestion of a lady friend who was with her, he said he would certainly not think of extracting them. He then cut away all the top teeth except one, and all the other stumps he snapped off with something like a pincers, the bits flying all over the room. He then, the same afternoon, "dabbed" something into her mouth to take an impression for the new set.

"The Judge: What, immediately after?

"The Witness: Yes; and the next day (Saturday) I had the new set in.

"Proceeding, the witness said the following Monday night she found she could not wear them. Her mouth got into a most offensive condition, her health began to suffer, and she eventually consulted Dr. Mullin and Mr. Quinlan.

"Dr. Mullin, who was then called, deposed that when plaintiff came to consult him on the 22d of November he found her suffering from inflamed and lacerated gums, from which there was a discharge, and the teeth were broken off. She was also suffering from dyspeptic and gastric trouble as a result of not being able to masticate her food. The treatment to which she had been subjected was most improper from a medical and dental point of view.

"Mr. Quinlan, dental surgeon, of Cowbridge Road, the next witness, said when he examined the plaintiff on the 23d of November he found that the remains of her teeth were bathed in matter, and that a number of sound teeth had been broken off.

Her mouth was in a shocking condition, and it was the worst case he had ever seen. He eventually extracted twenty-two stumps for her. The treatment as described by witness was exceedingly improper.

"The man Stephens, after being informed that he might give evidence if he pleased, but was not obliged to do so, took his place in the witness-box. In answer to Mr. Sankey he said he was only a dental mechanic, and not therefore a qualified dentist.

"The Judge: What right have you to perform an operation?

"Inquiring whether there was a medical society in Cardiff, and receiving an affirmative reply, his honor expressed the hope that they would take note of the case.

"Witness admitted having performed the 'operation' on the plaintiff.

"The Judge: Call it butchery.

"Witness added that plaintiff was, however, afterwards seen by Mr. Morgan. It was not true that he splintered the teeth. He cut them off, at the plaintiff's express wish, with cutters, and not one of them so dealt with was sound. He never cut or removed a tooth unless a patient desired it.

"The Judge: Did you take a model of the mouth immediately after?

"Witness: Every dentist does that.

"The Judge: And the gums were inflamed?

"Witness: They were not inflamed.

"In answer to further questions, he said the set put in was a 'temporary case. Mrs. Fletcher never made any complaint to them. The fee of a guinea was not meant to cover the cost of a complete set of teeth for the whole mouth, and this was made plain in their advertisement cards. He had not one of the cards with him. (Laughter.)

"Charles Morgan, who had been described by the previous witness as the qualified dentist in attendance, next submitted to the ordeal of a cross-examination. He stated he was a registered dentist, and

although his address was given in the professional register as of Wimbledon, he had been living in Cardiff for the last nine months.

"The Judge: I do not know what the Registrars would say to that.

"Continuing, witness said he did not see plaintiff until some time after the 'operation.' Her mouth was then in a filthy condition, but he attributed this to her want of care in keeping the plate clean. Witness was not one of the firm, but was only the manager in charge of the Cardiff business.

"He had been connected with the company for eighteen months, and his registered address at Wimbledon was explained by the fact that he had an interest in a practice there. He paid himself his salary out of the takings at Cardiff, remitting what remained after the defrayal of all expenses to the firm, of whom he believed Mr. Victor Goodman was a qualified dentist. He had heard of Messrs. Goodman having paid sums of money to compromise similar cases to this.

"Mr. Sankey: Is not this a correct statement of the case? You are a registered practitioner; you get what money you can, take a certain sum out of it, and remit the balance to unregistered practitioners.

"Witness: That is the sum total of it.

"Mr. Sankey: Is that not a case of covering?"

"Witness: No. Certainly not.

"This concluded the evidence.

"The judge said he hoped this case would be a serious warning to Cardiff people not to employ these advertising, unqualified practitioners. He knew of no more shocking case of maltreatment in this way of a poor, unfortunate woman, and he was only sorry he could not give judgment for a larger amount. He believed entirely the evidence of Dr. Mullin and Mr. Quinlan, and did not believe the man who had performed. He gave judgment for the full amount with costs, together with the costs on the application for adjournment.

BRIEFS.

LANSING ABSCESS.

When a young patient calls with the first molar dead in the inferior jaw, the face badly swollen and an abscess about to make an external opening, which would leave a scar that would mortify both patient and yourself, don't extract the tooth, in your eagerness to prevent the fistula. Insert a small bistoury along the external surface of the bone opposite the affected tooth and in the direction of the anticipated opening, not fearing to cut too deep. The abscess will open in the incision made, swelling and pain will soon subside and the tooth may be saved, were it possible to save the tooth before the abscess formed.

FILLING VS. CROWN.

We should not use crowns until every possibility of filling is removed. Many bicuspids and molars that are crowned could be better preserved and more nearly approximate nature, by preparing the surface for filling. Where there is an occluding weak wall, grind it down from one sixteenth to an eighth of an inch. Where there are no walls, insert pins in canals, allowing ends to extend up into the crown space. Take a guttapercha cap crown, cut away the flat surface and the remaining band can be easily adjusted to the tooth, contoured with warm instruments to meet the demands. Then fill with amalgam, allowing the band to remain in situ for a day or two, when it can be removed and the amalgam polished.

There are many good molars doing excellent service, after this treatment, presenting an entire masticating surface of amalgam. Care must always be taken with amalgam to condense well and my custom is to use warm instruments in packing.

BACKING PINS.

Many ways are given for disposing of the pins after the backing is adjusted to a porcelain facing. How is this? With a sharp

chisel or graver placed a little up on the pin, cut toward the backing, the little particles or shavings fold on to the backing. After cutting around the pins in this way, clip off the extra length with cutting pliers, then the remaining portions can be burnished to the backing covering any enlargement of the holes that might accidentally have been made, thus precluding the possibility of borax insinuating itself between the metal and facing.

DENTIST OR STOMATOLOGIST.

The discussion as to whether we are dentists or stomatologists reminds me of the little boy who got mad when his teacher told him he was an animal. Just belonging to the human family was enough for the boy. If being a dentist is enough for some men, why all the combined efforts of the profession could not open their eyes to broader visions. There can be no doubt that stomatologist is a more definite term; truly significant. When the colleges change the degree, accepting the better term, it will be the preference. Many will object to anything until the tide seems to be against them, then they follow even if it is with reluctance. Every reform meets opposition, but we cannot on that account close our eyes to the light. In the language of the editor, let's "wake up."

DENTISTS IN THE ARMY.

Twelve or fifteen years ago Dr. R. B. Winder, then Dean of the Baltimore College of Dental Surgery, was working to have dental surgeons appointed to the army and navy. He never saw the fruit of his labor, but the sentiment is growing and the time is coming when such provision will be made. That the bill failed in the last session suggests that we work harder on the next. Persistent effort in a good cause cannot be defeated.

EASY EXTRACTION.

To make otherwise difficult extraction easy, with the engine, separate the roots and remove the process, using new burs or

drills, to prevent septic poisoning. The operation is attended by very little pain in comparison to the failing pinches of the forceps. After the process is removed the roots may be easily extracted with the forceps, and the healing is very rapid.

ANNEALING GOLD.

You will never appreciate the true working qualities of cohesive gold until you quit passing it in the flame of the lamp. Use a sheet of mica or an annealing tray. Don't be penurious. The good effects will pay for the difference.

W. H. WEAVER.

In Haste.

A lady patient was on the eve of leaving for a distant city and rushed in to have a tooth added to her plate—she could give me but so much time. In my haste (hurry is of the devil) after heating the flask, I forgot to screw it down (I use a stirrup) and not until I came to remove it from the vulcanizer did I discover it. In an instant the thought came, the rubber is still in a plastic condition, and without losing a moment, I screwed it tight and commenced to cool it. Imagine my surprise and delight to find it all right.

N. Y.

I have been using for some months, for root-canal filling, balsamo del deserto dissolved in an alcoholic solution of hydronaphthol. This varnish "runs" readily into fine canals and can be followed with gutta-percha points. It seems to be satisfactory. It is best carried to the canals between the points of a pair of Flagg's dressing pliers.

L. VAN ORDEN.

San Francisco.

All persons using iodoform know how difficult it is to remove its odor from the hands or from instruments. Use spirits of turpentine on the hands or instruments; it can be added to water, and in using soap makes it very efficacious.—*Le Progres Medical.*

SULPHURIC ACID AND ROOT CANAL OPENING.

Sulphuric acid is unquestionably variously valuable as a remedy in the practice of dentistry; possibly no single remedy possesses so great merit as a local applicant to the osseous or soft tissues.

Judiciously used, it is always beneficial and never hurtful. It sometimes fails of virtues and results claimed for it, as with many remedies in use, which are weakened considerably, and fully appreciated in consequence of claim for properties they do not possess.

For several years past much has been written and published concerning the use of sulphuric acid as an *effective agent* in opening root-canals. Some statements and reports would lead us to believe that all that is necessary to effect speedy entrance into canal-roots is simply to twirl a few shreds of cotton around a broach, moisten with the acid, force entrance open, and enlarge canal entire length, without much difficulty. Truly, very encouraging and captivating to the non-initiated. But there never was a more deceptive error heralded, nor one less sustainable.

All who have had much experience in the use of sulphuric acid and are familiar with its properties and effects on healthy and diseased osseous structure, know very well, that it produces no more immediate effect on the walls of root-canals than so much water, from the fact that walls of canals are always healthy, except sometimes are diseased at the apex. It is a well-known and established fact, that sulphuric acid will not produce perceptible quick effect when applied to normal dentine, but when applied (same strength) to diseased tissues, caries or necroses for instance, the effect is plainly perceptible in a brief period.

I have experimented considerably to determine the merit of acid as a canal-opener, and so far have failed to accomplish such

results as I have seen reported. The same instruments as persistently manipulated with water, in place of acid, will produce as favorable results. The matter can be easily tested with teeth out of the mouth, and it will require but little time to convince any one of the non-effectiveness of acid in canal work and proof positive will be demonstrated that water for the purpose is as effective as acid. Sulphuric acid does not act sufficiently rapid upon healthy osseous structure to be effective in opening canals. Suitably tempered instruments (drills and broaches) will accomplish the work, if to be accomplished, and as effectually without as with the aid of acids.

In the event of a diseased, softened state at the apex of roots the use of sulphuric acid directly applied will prove efficacious. Possibly no one remedy, or all remedies used in such cases, can produce better curative results. It never fails to produce effect desired when applied to diseased osseous tissue, but is slow of action, and is worthless for effect when applied to normal dentine. Inflamed gums can be greatly relieved, and quickly by the application of sulphuric acid strength regulated to suit respective cases. Possibly better results more universally follow its application than any other known remedy. In treatment of pyorrhea alveolaris it has no equal and for other diseases it is effective when rightly used, but in no way can it be applied so as to be effective for canal opening.

Much time and patience is uselessly expended by many dentists in effort to open root-canals, many of which can never be successfully opened and filled from apex to pulp chamber, but if it could be made a success, the necessity for and benefit derived, in a large percentage of cases, will not justify the loss of time and expenditure involved.

Common sense dictates and demands there must be a reasonable limit to effort in operations on every line, and in all directions.

Extremes are never in accord with true science and conservatism.

The closer we adhere to a well-defined conservative line of practice (ignoring the impractical) the more surely may we anticipate favorable and gratifying results that will benefit and please the patients, do credit to dentists and elevate the profession.

B. F. ARRINGTON.

Carrier Pigeons as Aids in the Practice of Medicine.

Dr. Arnold, of Illinois, who is a country physician, employs these birds in his practice to his great satisfaction. It seems that when he has a serious case he will leave some of the pigeons at the patient's home and have them loosed one at a time at intervals with messages about the condition of the patient.

Left-hand Screw-plate.

Take a piece of steel wire, says Dr. Beebe, and cut on it a right-hand thread. File two sides opposite each other flat. Harden and temper this tap. Drill a hole in a piece of steel plate to fit the tap, being a smaller. Cut threads in this plate with the tap just made, by turning to the *left* with a steady pressure to overcome the right hand lead. Temper the plate hard and it will be found that it will cut a left hand thread.

The large number of friends of our editorial associate, Dr. J. A. Chapple, will learn with sorrow of the death of his honorable father, who died recently at Athens, Ga.

Now that you have had four consecutive numbers of the WEEKLY, we trust that you are well enough pleased with it to desire it continued.

Our highly esteemed co-editor, Dr. H. H. Johnson, of Macon, has been elected to the Chair of Prosthetic Dentistry of the Southern Dental College.

THE
American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

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Subscription \$2.00 per year; \$1.00 for six months—including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, July 14, 1898.

Sealing up the Pockets.

In the last issue of THE WEEKLY, page 525, in an article headed "Leave Open the Pockets," B. F. A. criticizes a little comment made by the writer in No. 40 of THE WEEKLY, in which was advocated the sealing up of the pus-pockets about the alveolar margins, caused by pyorrhea alveolaris. Of course it must not be supposed for a moment that the intention was to permanently seal the pockets, or even to seal them until healing had taken place and the disease had been cured. The desire was to seal the pockets between treatments to prevent food and other substances from crowding in, acting as a terrible irritant, interrupting the action of the medicine and delaying the healing process. B.F.A. claims in his article that it is not only unnecessary to seal the pockets, but that "*it is all important the pockets should be left open.*" He further says he "holds that an impossibility in sur-

gery should not be considered or in any way held accountable for failure in treatment and cure of any disease that is amenable to surgical treatment, as in the case of pyorrhea. Certain things," he says, "will do to mention and sometimes discuss for sensational effect, but to attempt to utilize for beneficial results would be time lost and no profit to any one. The less we have to do with impracticals the better will be the results."

Now, we believe we know who B. F. A. is, and we have a very high regard for his opinions, and especially is he considered as authority in the treatment of pyorrhea, but the strong language quoted above must have been written hurriedly without proper consideration. It is not becoming in one of much experience to condemn a thing as utterly worthless until it has been demonstrated to be true. As yet there has been no successful method discovered by which the pockets might be sealed up so the results might be determined. His positive language is only an assertion. To say that to close a pus-pocket in surgical cases between treatments to prevent the ingress of foreign substances is an impossibility, won't go at all. It has been proven beyond a doubt that the most successful antrum treatment is to pack the cavity between treatments and discard the much overrated drainage tube. In fact, it is not uncommon at all in any class of surgery to pack lesions and cavities of all descriptions with tampons and gauzes to promote healing and prevent the entrance of any foreign irritant to retard the forming of healthy granulation. A pyorrhea alveolaris pocket is not so different from other lesions calling for surgical treatment, except that the cavities are small, delicate and tedious to manage. You could not very well pack them with a substance like iodoform gauze, but to say that "*it is all important that*" these pockets should be left open to pack full of food and foreign matter every time the patient eats anything,

which they *will do*, sounds a little inconsistent to say the least. It was not intended by the former article in question to create the impression that all cases of pyorrhea was incurable, even with the difficulty of contending with open pockets, but it was and is now the opinion of the writer that the treatment of such cases would be much facilitated if some method could be devised whereby such pockets might be effectually sealed *between treatments* by some non-irritant sealing. H. H. JOHNSON.

To Replace a Broken Tooth.

Where a tooth or block has been broken from a vulcanite plate it can very often be reliably repaired by drilling a cavity in the rubber just under the tooth pins, having sufficient undercuts for the retention of the material. Then by filling these undercuts with amalgam freshly mixed, and filling the rest of the cavity, covering the pins with soft solder—scraps of Weston's or Watts' metal preferably. This is accomplished by holding the tooth in place with plaster, or with the index-finger of the left hand, protected with a pad of asbestos, while with any small instrument that will serve as a soldering-iron, the solder is melted, using muriate of zinc as a flux. The work will be quite stable as soon as the amalgam has time to harden. The advantage of the amalgam is that it forms a base upon which the metal used as a solder will flow, and averting its tendency to ball up and pull away from the cavity walls in the vulcanite.

The solder will form a good union with the amalgam. ATKINSON.

Harpers Weekly says: "There seems to be some reason to anticipate a time when New York families will contract with a syndicate of physicians, comprising a complete set of the necessary specialists for the supervision of the family health at a fixed annual price."

Practical Hints on Prosthetics, Obtained from Various Sources.

Plaster will set more readily if tepid, not hot water, is used. Cold water will retard setting.

Conical shaped glasses or porcelain bowls are nicer to mix in and the plaster readily comes away if a little water be added to the plaster after it is set.

To properly mix plaster, put water in first, gradually adding the plaster; this prevents air bubbles.

In mixing for impressions, if a little coloring matter, such as powdered pigment be used, the line of demarkation between the impression and model will be clearly defined.

If it is a high roof put some plaster in the vault with the plaster knife before inserting the cup, or better still, put a wad of wax in the center of the impression-cup corresponding to the vault.

In taking plaster impressions of partial cases, remove before the plaster has set very hard. If pieces break away save them, place them back where they came from, wax them in place, and the impression will be accurate. After pouring some plaster into the impression shake it down, and then with a slinging motion of the hand throw out all the plaster that is soft enough to leave the impression. Then fill up the impression with remaining plaster, shaking it down well. The result will be a model with a dense hard surface.

To cut an old model easily—soak in water a few minutes, when it will be easily trimmed.

To take impressions where the teeth are irregular—fill spaces between irregular teeth on the ridge with plaster or modeling compound, varnish and oil the cores thus made, take impression over all, remove impression, then remove cores, place in the impression, pour the model and you have it perfect.

To mend plaster casts so that heat may afterwards be used without affecting the mend, use oxy-phosphate cement.

Impression material from which a die may be cast straight: Plaster, 1 qt.; pumice stone, powdered, 1 pt.; chalk, 1 pt. Mix and use same as plaster.

To prevent plaster sticking to the teeth when taking impression, slightly oil them.

To make a warped rubber plate fit again: Take a new impression of the mouth, from which make a model. Warm the plate until quite pliable. Press down on model and dip in cold water. NED.

Vulcanite Finish.

Let us suppose we are putting up a full under denture, and it is ready for the flask. At this stage of the work I coat it with tin-foil, such as may be had for the asking at any store where they sell tobacco. With a piece of cloth smooth it, then cut off a strip of an inch or less in width, as the case may require, cover the entire surface outside, carrying it up to the cutting edge of the teeth. Smooth it, and then with the back of a penknife blade force the tin in all the interstices between the teeth so that no plaster can possibly get in. Then cover the entire inside in the same way, and when your case comes out of the flask after being vulcanized it will be nearly as clean as a hard-boiled egg when it comes out of the shell. Cut off the escape, and if thoroughly done, your case will be almost ready for the sandpaper. It save times. I use tin in almost every case, even in partial sets.

G. V. N. RELYEA.

Oswego, N. Y.

Is it not about time that the subject of Dental Education was eliminated from State society programs. Let such papers, if any appear, come under miscellaneous or voluntary essays.

Children and Sleep.

Dr. H. Gillet (*Annales de la Polyclinique de Paris*, June) says on this subject: The need of sleep in infancy varies with the age of the subject. At birth, and during the early months, the nursing sleeps and suckles only. At the end of the first month it begins to remain awake for short periods, gradually increasing in duration. Up to three years or thereabouts the custom of a daily siesta after going out should be maintained. Up to ten or twelve years the hours of sleep exceed the waking hours. The sleeping time necessarily decreases as the age advances, according to Bergeron and d'Heilly, in the following ratio: Up to seven years, from ten to ten and a half hours; ten years, from nine and a half to ten hours; twelve years, nine hours; fourteen years, eight and a half hours. After that age the division of the day into three eight-hour periods becomes good. The midday siesta, except in southern countries, is no longer to be allowed. Whatever theory of sleep is held, it is none the less incumbent on the hygienist to see that the organism has an imperative physiological need of this repair of forces. Observation shows us the duration, the hygienist prescribes the measures necessary to insure this sleep. The infant, even when very young, should be habituated to sleep at night naturally. To rock and to sing to it are evil measures. Rocking children must be prohibited as conveying to the brain a vibration which is not without danger. Singing is at least inconvenient, if it does not render every one the child's slave. Care must be taken to prevent the contracting of other bad habits also, such as sucking something, etc. To insure sleep to the child the following rules should be observed: 1. The child should always be put to bed at the same hour. 2. Relative quiet and darkness are requisite in the child's room; relative only, since it is necessary that the child

should sleep in spite of the presence of other people who are not making much noise. A strong light should not be allowed to fall directly upon the face of the child. 3. The temperature of the room should be moderate, since excess of either heat or cold is hurtful, though less so if the child is well protected. 4. Aeration should not be inconveniently confined—there must be no curtains shutting off the air. 5. Waking should take place at nearly the same hour, or at least the child should not be so aroused as to cause any great variation from its habitual time of repose. The sleep of young children should not be cut short under any pretext whatever, until it has overreached the usual time; but it is often requisite to allow an overplus of sleep demanded in consequence of growth. Sleep and proper nourishment are the best repairers of overfatigue, but this must not be allowed to induce a slothful habit, for excess of sleep retards general nutrition.

One other point in Dr. Gillet's article deserves notice, and that is his commendation of the English custom of setting aside in the house an apartment or "nursery" for the children. It is not good either for grown people, or for the children themselves, that the latter should be "all over the house," or that they should spend too much time in association with grown up folks.—*New York Med. Jr.*

Open-Faced Crowns.

The following method of making such crowns by Dr. Bridges, is given by the *Bur*:

This was a radical departure from the ordinary open-faced crown as a support for a bridge. In this method the lingual of the tooth to be operated upon was cut quite freely away, to give a flat base for the crown, and an impression of it taken in gutta-percha, the tray being made of a thin strip of metal. The tray with its contained gutta-percha is forced high up on the tooth,

up under the free margin of the gum. When the impression has sufficiently hardened, it is then removed and invested in plaster, tray and all, and a Mellot's metal model run up. To this model heavy pure gold-foil is burnished to an accurate adaptation, when it is carefully removed and invested in investment material. To the back of the foil is then sweated clasp metal to the desired stiffness.

By this procedure it is claimed accuracy of fit, great strength, saving of tooth structure, and no exposure of gold, are attained.

Fitting Logan Crowns.

The following is the method of Dr. C. J. Soule:

The tooth to be crowned is ground below the level of the gum all around and convex labio-lingually. The canal enlarged to accommodate a Logan pin. A temporary pin, long enough to reach to occlusal edges of the adjoining teeth, is placed in the canal and a plaster impression taken which withdraws with it the temporary pin. A Mellot's metal model is run into this impression. This gives an accurate model of the end of the root with the temporary pin in correct position. The pin is then withdrawn, which gives direction and location of the root-canal.

To this metal model a Logan crown can be accurately and quickly ground up.—*The Bur.*

"If Congress is good to the army, dentists, with relative ranks, will be provided for each regiment."

The above we take from the *Maryland Medical Journal* of July 9th. It is the first medical journal to speak out in favor of this move, and it is ahead of most of the dental monthlies which have not spoken a word. Wake up!

Are you going to the meeting of the National? If so, do you want to go on the through sleeper?

THE
American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., JULY 21, 1898.

NO. 45.

**BITES AND SOME METHODS
OF TAKING THEM.**

—
BY MR. J. MAHONEY.
—

Although there is apparently a sameness about the taking of the bite in each case we meet, yet there are many little details which must not be overlooked; otherwise we will meet with failures, and it is to these important details I would call your attention.

For our first case we will take an edentulous upper and lower, to which we purpose to make a full set of teeth. This is, I think, one of the most difficult in which to obtain a correct bite. A person generally is fairly well on in life by the time he or she has lost all the teeth, and then as you know there is much greater movement in the lower jaw than formerly, and this in itself makes it a difficult matter to take the bite.

It is a very good plan to get in the first instance an approximate bite at the visit that you take the impression. This can be done by softening beeswax in warm water and then shape it up roughly to the mouth and get the patient to bite into it. To prevent biting too close, insert an instrument into the center of the wax, although the better plan is to get the patient to close until the lips meet naturally.

After having obtained the models and steamed them, fit into the wax bite, and fix in position in a slab articulator of either plaster or composition.

Presuming that we are going to make

vulcanite plates for this particular case, the next step is to make some hard base on which to set the teeth, and what we must aim at is to use some material which will not alter in shape either with the heat of the mouth or pressure required to obtain the bite, and the best of all materials for this purpose is a plate of vulcanite, vulcanized to duplicates taken from the original models.

This is very quickly done by trimming the duplicates very shallow and drying them, and while hot spread a layer of rubber over them which adheres to the hot model. This method of packing saves a lot of time as there is no boiling out to be done, for they can be inserted completely in plaster and put into the vulcanizer immediately. By this means you obtain a plate which fits the model perfectly, and which will hold up in position in the mouth much better than any other materials; this is a decided advantage, for if the upper plate will not hold up in position, a wrong bite might be the consequence.

There are other substances which may be used for this purpose and a very useful one is what is known as "Base plate," sold by S. S. W. These are made up in boxes of one dozen and can be obtained at the depots.

This is extremely useful when there is no time to take duplicates and wait for vulcanizing. They are heated as you would a wax plate and pressed to fit the model. The model ought to be steamed, otherwise it will get rubbed very badly. This base plate will stand the heat and pressure in

the mouth quite well, but you cannot get a perfect fitting plate as with vulcanite.

It is customary with some men to set up on the base blocks of composition or wax, but I think it much better to completely set up either the upper or lower, it does not matter which. I have been in the habit of fixing all the teeth on the lower, and the six fronts on the upper, with wax behind to oppose the lower teeth. By this means one is better enabled to notice whether the natural contour of the lips and cheek have been restored, than is possible with simply blocks of wax. The lower teeth also make a perfect imprint into the wax, so that there can be no mistake in fitting together afterwards for the bite in plaster. The great advantage of the rough bite which was taken in wax is now very apparent, because if you obtained it somewhere near, you have the teeth probably very nearly correctly placed, and the proper position of the teeth is a good guide in obtaining the right distance between the jaws. Without that temporary bite very probably the position of the teeth will be entirely wrong. They may be either too long or short, or too far in or too prominent, and this will mean a resetting of both cases, which is a waste of time and trouble.

As before mentioned the amount of play that exists in the lower jaw of a patient who is edentulous, is generally very extensive, and it is best to ascertain the amount of movement that does exist, both laterally and before backwards.

As most of you know, when you ask the patient to bite inside, they generally manage to stick the lower jaw as far out as possible and *vice versa*. To get the patient to bite in as far as possible, a good plan is to place a flat instrument, such as a spatula, slant ways between the teeth; this will cause the jaw to be drawn backwards in closing. As a rule a patient cannot bite very much further back than the natural, so that having obtained the extreme backward position,

you can easily get the jaws to close just a little further forward, which will be about the correct position.

If you have the upper teeth placed in the center, and the lower corresponding to them, you cannot have the bite very much out laterally.

Something must be said about the size and arrangement of the teeth. In choosing the front teeth, pick out the upper first according to the physique of the patient. Then find a lower set the canines of which when placed edge to edge with uppers, meet between the canines and laterals. This will cause the first upper bicuspid to meet between the first and second lower, and the second upper between the second lower and first molar, which is the arrangement in the natural teeth. The upper bicuspids and molars should also be arranged to curve upwards, the lowest point being about second bicuspid, and the highest the last molar, and the lowers should have the corresponding curve or arch. In other words, the surface of the upper molars and bicuspids should be convex and the lowers concave.

The extent of the curvature of the arch is governed by the depth of the overbite and the length of the cusps on the bicuspids and molars.

The greater the depth of the overbite the more pronounced is the curve of the arch and *vice versa*.

It is sometimes rather difficult to obtain this proper curve of the arch as the tuberosities are often not absorbed, but whenever it is possible, that object should be aimed at and straight lines avoided. If you examine a perfect set of natural teeth *in situ* you will find that if you throw the lower jaw forward until the front teeth meet edge to edge, the lower third molar and the upper twelve-year will also be in contact so that there is pressure at the back as well as at the front. Now if the teeth were arranged in straight lines, this could

not be, because there certainly would be a space at the back and all the pressure would be on the front. In an edentulous case, this is a very important point to bear in mind, for if that arrangement is maintained, it will prevent the tilting downward of the upper plate.

I have no doubt some of you have experienced this sort of thing—*e.g.* patients complaining that when they wished to bite with the front teeth, the upper plate dropped down, which fault I think could have been avoided had some attention been paid to the above mentioned detail.

To make sure that the teeth are in the correct position in order to obtain the above result, a suitable articulation is necessary, and this should represent the movements of the jaw as correctly as possible, so that when the cases are set up, the lower model may be made to move about as the lower jaw does.

What has been said about an edentulous case will apply in a more or less modified condition, to most other cases, so that there will be no need for repetition.

The next case we shall consider will be an upper with one molar standing, to which we intend to make a vulcanite or metal plate; and let us suppose that there are not sufficient teeth lost in the lower to need a plate making.

To this molar we should naturally fit a band, and I will try and show you how the presence of this molar and band may be the cause of an incorrect bite. This case should be set up with the six fronts and wax at the back to oppose the lower teeth. When the plate is being tried in, it is quite possible that on account of the band fitting badly, or fitting too tightly, the plate tilts down on the opposite side, and it is to this tilting that I would call attention, for if the plate does not fit up into position accurately, the bite is sure to be short on that side which tilts; to remedy which would mean removing and lowering the teeth on that side. So before we get the patient to bite

into the wax, we must make sure that the plate goes well up into position and remains there while the bite is being taken. If it is found impossible to keep the plate in position, a good plan is to put an additional quantity of wax on the side opposite to the molar, keeping it rather harder than the other side, and this will force it up into position; or an instrument might be pressed up on that side into the wax.

As another example we might take this same case which we have just considered, with this difference, that there are sufficient teeth out in the lower to need a case some time, but which for various reasons we do not wish to make at the time the upper plate is made; say all the back teeth on one side are gone.

Take a good impression of the lower all the same, just as if you intended making a case to it, and set up in this, either in composition or wax, the back teeth, so that there will be something solid to oppose the wax in the upper. This will enable you much more easily to fix the models accurately together afterwards. Also if a good impression were taken of the lower, there would be less likelihood of making the upper so that there is scarcely sufficient room for the lower teeth, through bringing the uppers too low at the back. This, of course, would not be noticed until a lower plate came to be made.

I think we have considered sufficient examples in detail for our purpose, and now I should like to call your attention to a few points which may occur in nearly every case.

The tilting of upper plates, as before mentioned, is often the cause of a lot of trouble, even in cases where there are several teeth standing, unless there are teeth on both sides to which we can fasten bands. It will be hardly necessary to enumerate the cases in which this fault is likely to occur. The best thing to do is to be prepared for the trouble, and, if possible, avoid or counteract it.

Always take good impressions whether a case is to be made or not.

A frequent cause of wrong bite is because very little care is bestowed on the impression of opposing teeth when no denture is required for that portion. The result is that the teeth come out sucked, and therefore shorter, which necessitates sometimes a great amount of grinding when the finished plate is inserted, and often molars and bicuspid are put on a case when there is only room for flat teeth. In taking impressions it is often necessary to make a special tray, and when that is the case one is likely to bestow very little care on the first one, so that one ought always to try the cases in with the plates fitted to the good impression; because, if fitted to the first, and probably rough one, they will not go down into position on the second, consequently a wrong bite will be the result. This is, I think, another very frequent cause of trouble.

When trying in plates always have the models handy, and after the patient has bitten into the wax, put the cases on it, and see if they meet together as they do in the mouth, and if there is any discrepancy, allow for it and make a note or mark on the model as a reminder. It may be that the teeth on the model seem shorter or longer; if the former, you may depend that it is because the impression was removed before being set, and if longer, very probably the case or cases were not properly in position. Always have a good imprint in the wax of opposing teeth, so that there is no doubt whatever which is the correct position in which to fix them for the articulator.

In trying in cases there are many points which should be noticed, such as whether the bands fit the natural teeth as they do on the model, and also their suitability in shape to the teeth which they clasp; but this hardly comes within the scope of this paper.—*British Journal of Dental Science.*

DIFFUSION OF REMEDIES IN ALVEOLAR ABSCESS.

The attempt to drill through the foraminal apex of a tooth-root is too hazardous an operation to be attempted save in exceptional conditions. The canal is never a straight channel, it being deflected as soon as it reaches the limit of the dentine. This makes it, in most instances, an impossibility simply to enlarge it, even dismissing the fact that it is usually a delta instead of having but a single opening. When, as is too often the case, the foramen is quite imperious and remedies cannot be forced through, it materially complicates the treatment of alveolar abscess. This is especially the case with bicuspid and molars. When it is impracticable to open through the tooth to the point of infection but two methods for successful medication remain. The one is to open from the outside, a painful, troublesome, and with molars too often an uncertain process, and the other to clean out the canal as far as possible and then trust to the diffusive power of the remedy.

A great deal has been said and written about the penetrative power of carbolic acid. It has been asserted by high authority that as a coagulant it is self-limiting, and that its ability to penetrate tissue of any kind is but slight. This certainly does not hold good in medicine, for its destructive power on certain internal organs is universally recognized. That its topical action on albuminoid tissues in forming an insoluble carbolate may circumscribe its powers may very well be, but that this inhibits its diffusion through a tooth and prevents its therapeutical or antiseptic effect on tissues beyond is not in accordance with clinical practice, or with the observation of numerous careful experimenters. Our own experience of many years has brought the conviction that there is no remedy with which we are acquainted that is so well adapted to treatment of septic conditions.

that must be carried on through a tooth-wall as carbolic acid. We have tried many drugs, only to be driven back to the use of this one reliable agent.

The method of employing it has usually been as follows: The canal is opened as far as possible, and if constricted is enlarged, either with instruments or by the use of sulphuric acid. When fully satisfied that the foraminal opening is not patulous, and that it cannot be opened by forcing through a fine spring-tempered broach, the rubber dam is placed in position and pure carbolic acid is pumped to its farthest extremity. A few threads of cotton are then wound on a broach, dipped in the remedy and made to carry all they will convey. This is thrust into the canal as far as possible and left there, thus filling the opening full of carbolic acid. A pledget of cotton as large as can be used is saturated with a chloropercha solution and packed into the cavity, thus forcing the carbolic acid into every interstice and hermetically sealing it in, and the patient is dismissed for the time.

The cavity is usually opened the next day. If the carbolic odor is plainly recognizable it is an indication that it was unnecessary to disturb it so quickly. If it has departed it should have been changed earlier. That is another reason for the selection of this remedy. The presence or absence of its peculiar and easily-recognized smell is a sure indication as to whether or not its virtue has departed and its antiseptic power is neutralized. Until it has thoroughly saturated and sterilized the tooth tissue it may need frequent renewals, but after that it may be allowed to remain a longer time.

A comparatively small proportion of abscesses will refuse to yield to persistent treatment of this kind. When it is found to be ineffective further degenerative changes will almost certainly have succeeded. Secondary pus-pockets may have been formed by the burrowing of pus back into the bone, or through the infective osteitis

that has been the result of the acute inflammation, and these, beyond the reach of the antiseptic, may continually reinfect the primary cavity and prevent healing. Or the cavity in the bone at the foraminal apex, caused by the breaking down of the osseous tissue, may be so large that it is impossible thus thoroughly to sterilize it. Or there may be some necrosed tissue, which of itself is sufficient to prevent restoration. In such cases the only alternative is to open through to the seat of disease from the outside, and to remove the affected portion of bone. It should not be forgotten that the infected point is not necessarily at the apex of the tooth.

The cure of an alveolar abscess by these means is usually more readily brought about in a lower than in an upper tooth, because the diffusion of the remedy is assisted by the force of gravitation. But in either jaw, if due patience and perseverance are exercised, nearly all cases of uncomplicated alveolar abscess may be successfully treated through the penetrative power, the absorption and diffusion of carbolic acid thus employed.—*Dental Practitioner and Advertiser*.

Strengthening Platinum Caps.

The *Bur* reports Dr. W. V. B. Ames as follows:

In constructing a cap for a root upon which he intends to mount a porcelain crown Dr. Ames makes it of very thin platinum, thereby being enabled to get a more accurate fit. This cap is afterwards strengthened by a solder composed of platinum and gold. For soldering the parts of the cap together, he uses a solder composed of 40 parts platinum and 60 parts gold.

Are you going to Omaha the last of August? The National Dental Association meets there then. A through sleeper will go from Atlanta via Nashville.

POPULAR DENTAL EDUCATION.

We have seen, heard and written much on this subject, but it seems that the Mississippi Dental Association has gone at it in the best way possible. Dr. W. E. Walker, of that State presented the plan to the Texas Dental Association, which is as follows:

"As a member of a committee appointed by the Mississippi Dental Association, I beg to lay the following matter before your body. At the meeting of the Mississippi Dental Association, held the first week in April, Dr. W. O. Talbot, of Biloxi, read a very excellent paper on the "Dental Education of the Public." The paper was fully discussed, and resolutions adopted appointing a committee to act in conjunction with a similar committee which the Medical Association of the State should be requested to appoint, and also with the State Superintendent of Education, to devise means of giving instructions in oral hygiene to the pupils of the public schools, and through them to the public. The committee is also to bring the matter before the Legislature of the State, and endeavor to obtain the passage of an act making such instruction compulsory, possibly as an amendment to the law requiring the use in the public schools of text-books on the subject of physiology, hygiene, alcoholics and narcotics. It appears not to be impracticable by concerted action to have enforced such a revision of the text-books adopted by the different State Boards of Education as shall make emphatic the importance of the care of the mouth and teeth as a most important feature in general hygiene. A special text-book on oral hygiene might, perhaps, be adopted, if recommended by both the Medical and Dental Associations, but I deem the "additional chapter" feature more feasible. I am well aware that this subject has been discussed *ad nauseam* in our societies, but thus far no tangible results have

accrued. The plan I have briefly outlined appears feasible, and it is hoped that your association will take similar action in the matter. In Mississippi, the matter has been placed before the State Medical Association, where it was favorably received and referred to the State Board of Health. I had the pleasure of presenting the subject to the Alabama Association, where it was discussed with a great deal of interest, and a committee appointed to secure the co-operation of the State Medical Association. I learn from the chairman of the committee, Dr. J. P. Corley, the following, which I quote from his letter: "I was successful in securing the co-operation of that body (the Alabama Medical Association) in our effort to introduce a chapter on oral hygiene into our common school text-book on physiology and hygiene, and also a chapter on ear, eye, nose and throat. We expect to present the matter to the Educational Association in June, and secure their co-operation.

WM. ERNEST WALKER."

Pension M. D. Frauds.

How is this for high? It is better for low:

_____, June 8, 1896.

DEAR SIR,

Yours received I treted Wm. Akens after he cum Hoam from the serfis for polypup in his nosee and Running soar in his pastur. The polypup from the nite are and exposure the wonde cum from the cick of a hoars.

_____, M. D.

_____, February 30, 1897.

SUR,

I surtify I treted the sed sojer from 18888 to Date — foarmerly his stumik tub was jined to his nervious sistem but now it air rotted off cosing grate expectoring and hard of breth.

Your Obt. Servent,

_____, M. D.

New York Correspondence.

In the name of the New York State Society and the others whom I represent, I thank you very much for the notice accorded our effort to have a bill passed through Congress.

In this connection I take pleasure in informing you that although Congress has adjourned without the passage of the bill, nevertheless a great deal has been accomplished. The present situation is—the bill has been introduced in both houses of Congress and referred to the proper committees. The Senate committee accorded us a hearing, and we are assured that as soon as the bill is recommended by the House Committee, it will be favorably reported by the Senate committee.

The bill did not reach the House committee until very late in the session, and it was impossible to get a quorum after the reference; thanks, however, to the letters which reached the committee from their constituents, I am in a position to say that practically the majority of this committee also favored the bill. All that will be necessary in the autumn will be to give some evidence to our representatives in Congress when the matter is taken up again, that the dentists of the country, especially the organized societies of dentists, really desire this legislation, and there will be no obstacle in the way of its passage. I wish you would urge the members of the Southern, as well as the other dentists throughout the country, to see that the National Association at Omaha passes a resolution urging Congress to enact this law.

Anything which you can do in this direction, I am sure will be appreciated by the 3,000 men who signed the petition, as well as by,

Yours very truly,
R. OTTOLENGUI,
Committee N. Y. State Society.

The highest class of mechanics is required to practice successfully orthodontia. This is why so many fail to accomplish good results.

Removal of Broken Nerve Broaches and Drills from Root-Canals.

Some months since, while using a Gates-Glidden drill for enlarging the orifice of root-canal for treatment in a superior cuspid, the blades of the drill caught and cut a screw-thread in the tooth tissue, and the shank was twisted off instantly. I knew it was no use to drill by the side to remove it.

The cavity was treated with a small pledget of cotton wet with fifty per cent. sulphuric acid, sealed with gutta-percha for three or four days.

Next sitting, opened up cavity, found it filled with black oxide of steel, rinsed out, no discolor to dentine.

Found that a fine broach would pass by the drill. I gave another treatment. At next sitting the steel came out readily by the use of a Donaldson root-cleanser.

Canal in fine order and not discolored.

Second trial is all I have had occasion to make. A barbed nerve broach gave out in the canal. No great effort was made at the time to remove it. Gave same treatment.

Next sitting pyrozone, three per cent., was injected to cleanse the canal, and to my great delight the broach appeared with the foam. In either case the steel showed but slight change, except in color.

This may be new to some others as to myself. I do not recollect of its being reported. All I claim for it is, that it has served me well in two cases.

S. B. PALMER.

Syracuse, N. Y.

A Rubber Substitute from Corn.

We have received a sample of a rubber substitute made from corn. It is made from the oil derived from corn, and by vulcanizing it in connection with an equal quantity of crude India rubber, a substitute is produced which, for certain purposes, is equal to the best gum rubber at a greatly

lessened cost. The new corn rubber is claimed to possess all the essential qualities of Para rubber, including resiliency, and the discovery has been hailed with delight in the corn-growing States of the West. The manufacturers claim that the fact that corn oil does not oxidize readily makes this product of great value, since it is not affected by oxidation, so that products manufactured from it will always remain pliable and not crack as those made from other substitutes. This interesting substitute for rubber is very dark brown or black, and it easily rubs off in light brown rolls. It is at present sold as low as six cents a pound. It is manufactured by the Glucose Sugar Refining Company, of Chicago, Ill.—*Scientific American*.

When to Clean the Teeth.

The time of day when the teeth should be most thoroughly cleansed: If the teeth are to get but one thorough cleansing during the day, just before retiring is the best time to give it to them, as there are six or eight hours during sleep that the salivary glands are inactive, and fatty and starchy foods that may be lodged between and around the teeth are bathed in saliva, a partial digestive fluid, undergoes decomposition, forming acids which act more or less readily on the tooth structure at time of its formation; the salivary glands not active during sleep, acids are not diluted, as during day a free flow of saliva prevents to a great degree the deleterious effects of acids thus formed.

I think the teeth and gums should be carefully brushed after each meal with a medium soft brush, using as a wash, on damp brush, alcohol, rosewater and listerin, equal parts; the mixture above to be used once a day, just before retiring—*S. T. Potter* in *Ohio Dental Journal*.

Dr. Pieh before the Illinois Society said: Sulphate of copper is a useful agent in the

treatment of pyorrhea, and it is also a favorite of mine in the treatment of abnormal swelling of the gums from whatever cause. The gums are dried, and copper applied by means of a piece of orange wood, whittled thin, which is first dipped in water, and passed into the copper, a quantity of the powder will cling to the stick; then pack the copper down between the teeth and swollen gums. You can use it freely. It is not necessary to exercise care as to the quantity of the powder to be used; let it remain there for two or three minutes, then with a syringe of warm water wash the excess away. You will be surprised in the course of two or three days, and also much gratified, to see the extent to which the swollen gums have been reduced.

Oxiphosphate Fillings.

Dr. McKellops, of St. Louis, Mo., says: When, in treating the six year molar of a child, if you find a small portion decayed, you find it difficult to put in an amalgam or gold filling; but by putting in carefully an oxiphosphate filling and watching it till the child is fourteen years of age, I defy any man, if the filling is properly prepared and put in, to find a particle of decay there. If you put oxichlorid in a tender tooth you set up inflammation; but take a little iodoform and glycerine, and place it over the tender pulp, and a little asbestos paper over that, place in your oxiphosphate and let it set; you can then put in any filling you want, and it will not irritate the tooth.—*Items of Interest*.

Handy Dentimeter.

E. B. Edgers, D.D.S., Waterloo, Iowa, says: Take ordinary binding wire, make a loop near the size of the root or crown you wish to measure, insert the free ends into a nerve broach-holder, tighten and twist the wire closely. You will have a correct measurement of root.

THE
American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription **\$2.00** per year; **\$1.00** for six months—including Canada and Mexico; other countries **\$3.00** per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited. The editor is not responsible for the opinions of contributors. Advertising rates sent on request.

Atlanta, July 21, 1898.

Where Shall the Line be Drawn?

It seems that with some people there is either a misconception of ethics, or a tendency to overdo, in their zeal to preserve inviolate the escutcheon of professional dignity. The question has been brought prominently forward as to how far ethical men can patronize those inventions which bear the seal of a patent upon them, and whether such should be permitted as an exhibition at Dental Society Meetings.

The truth is, that with few exceptions, those instruments and appliances which are of most value are patented, and will continue to be—no matter who the inventor—so long as the patent laws are of force.

In most of the dental societies there is a standing committee on new appliances, the duty of which is supposed to be to investigate, and exhibit before the society all such as in its judgment are worthy of commendation. Some ultra-ethical men

have declared that a dental society should not be used as an advertising medium for the supply houses, and have forthwith interposed objections to the exhibition by the committee of new appliances which are patented, and further objected to the mention of the names of the houses which supply the various items of the exhibit. Some of them have gone so far as to deny to the supply houses the right to make an exhibit of its wares on the premises during a convention. It is hard to conceive a notion more puerile than this. It is often that the best part of a society meeting is the depot exhibits, and the clinics made up of what they offer for sale. The greater part of the dentists present do not have the opportunity of selecting from a well appointed assortment of dental goods, except at a society meeting.

But the narrowest feature of it all is that the committee, in making its report, must not mention where any item of the exhibit may be obtained, for fear of advertising the house. What good is the appliance to any one if he does not know where to get it? Of what service is the exhibit? What is it for? What is meant by trotting out a whole lot of appliances that are said to be very good, very fine, "but we must not say where we got them from, that would be advertising the supply house, it would be unethical, a compromise of the high standing of the Society?" This is veritable rot! as foreign to ethics as common sense is to the suggestion.

There would be no use in having the committee at all, if it were not contemplated that its work would bring to the attention of the profession appliances that would be of value in practice, and no value would attach to the exhibit if the spectators were denied the knowledge of where articles could be obtained. The same reasoning that would direct the appointment of the committee would authorize and require it to give all information possible concern-

ing any instrument or appliance it should deem worthy of exhibition, without any reserve or restriction.

But there is one class of merchandise which should not receive in any manner, shape or form the patronage of professional men, and that is a class commonly known as nostrums, compounds whose formulas are not known (except to the proprietors), with which the medical world is most sorely afflicted. The use of such is wholly unscientific, and is quackery, in its last analysis; upon these the lines should be drawn, for the man who would use his own brain in his practice could not touch them.

What right has a dentist to inject into the blood of a patient the contents of a bottle which he is told will prevent pain in extraction, he knowing nothing of what it contains? Suppose the patient has untoward effects from the injection, and he is called upon to explain what he had used, what will he say? He may name the nostrum, but that will not do; he will justly deserve whatever retribution is brought upon him. Let the line be drawn on nostrums, and let it be remembered that true ethics and true dignity are nothing in the world but a proper application of common sense.

D. D. ATKINSON.

The Two Bills before Congress.

There is now one bill before Congress. At least it will be before the next Congress, as it is in the hands of committees. The patent law bill, which should receive the hearty support of every dentist in the land. You can easily speak to your Congressman about it; also to your Senators. If the National Dental Association, at the August meeting, does what it ought to do, it will send a memorial to Congress praying for the appointment of dental surgeons in the army and navy.

Right now there are at Fort McPherson, this city, wounded soldiers from Santiago,

Cuba, who can only be successfully treated by a dental surgeon. This assertion would be spurned with contempt, we know, by the average army surgeon, but it is a fact nevertheless.

Let the National act well, and let each congressman and senator have a copy of the memorial before the next Congress convenes.

There must be concert of action, and all must do personal work. There is a very large element in the profession who will not turn a hand in this matter. It must be done by the few comparatively.

It will require work, and much of it, to get these bills through. They will need watching and stirring from the time Congress convenes until they are disposed of. Dr. Ottolengui seems to have the patent bill well in hand. Some one, or some committee, must have control of the other. If a bill is reported favorably by the committee to which it is referred in Congress, it is pretty sure to pass without much wrangling. It is before the committee that the hard work is to be done.

That Diffusive Treatment.

We will have to confess that the diffusive treatment of alveolar abscess, as detailed by Dr. Barrett in this issue, is new to us, and were it not for the very high regard we have for the ability of the writer, we would surely doubt the fact. But as we are never prepared, nor never feel authorized to dispute an assertion from a generally reliable source until a test demonstrates the fallacy of it, we will simply acquiesce in this instance and give the writer's method a thorough trial, acting on another's judgment.

The Value of Life.

A patent medicine wag says "whether life is worth living depends upon the liver."

A Case in Point—the Law Construed.

In the State of Georgia the laws preserve an old act which declares that nothing therein shall be construed to interfere with persons who were in practice prior to Aug. 24, 1872. There has been some contention that this proviso applied to dentists who resided in other States as well as in Georgia. The following case, taken from *Dental Register*, seems to offer a striking analogy to the proposition above, and very clearly shows that, as a matter of law, those persons who would now avail themselves of the protection of this proviso must have been in practice in the State prior to the passage of the act defining the several conditions of qualifications:

"An interesting point of statutory construction is involved in the decision of the Court of Appeals of Maryland, which was handed down February 10, 1898, in the case of Knowles vs State. An 1896 act of that State declares that it shall be unlawful for any person to practice dentistry in the State without first obtaining a certificate as provided by the act, while section 12 thereof excepts from its operation certain classes of persons, providing, among other things, that nothing therein shall be construed as to interfere "with persons holding certificates issued to them prior to the passage of this act." In this case, after a conviction in the criminal court of Baltimore City for unlawfully practicing dentistry without having obtained from State Board of Dental Examiners a certificate as required by the foregoing act, appeal was taken, contention being urged that the trial court had erred in rejecting as evidence a certificate of qualification and registration issued by the Board of Dental Examiners of the State of Ohio. But the Court of Appeals of Maryland takes the position that it was the intention of the Legislature to confine the act of 1896 in its application to certificates which had been issued by the Dental Board of that State,

under article 32 of the Code of Public Laws, to save all certificates which had been previously issued thereunder, without giving the act any extraterritorial force, especially as its language, taken in connection with the previous legislation on the subject, shows conclusively that the act refers only to certificates issued by the Board of Dental Examiners of Maryland, and not to those issued by other States. For these reasons, it holds that there was no error in the rejection of the testimony offered in presenting the Ohio certificate."

Dental Detection of Criminals.

Poachers were in a Yorkshire Assize Court charged with the murder of a keeper. One of the prisoners had the mark of a bite on his wrist, and an examination of the jaw of the murdered keeper showed that he had a peculiar conformation of the teeth. Plaster casts, both of the wounded wrist and of the murdered man's jaws, were made, and the two tallying exactly, the man convicted. In France, a man accused of the murder of a widow, had marks of bites on his right hand. The poor woman had one tooth in her upper and two in her lower jaw, and a cast made showed that these fitted exactly, and without the shadow of a doubt, into the wounds in the hand of the accused. But even more remarkable still was the evidence provided by dentistry at Manchester Assizes, not long since. A gentleman, who had a small dog with him, was attacked on a dark night by a ruffian who, after knocking him about, robbed him, and then promptly effected his escape. A tramp was arrested for the crime, but the prosecutor could not swear to him as the culprit, the night having been so dark, but the injured man pointed out that he had bitten his assailant on the hand, and that his little dog had also assisted with his teeth. The man arrested had marks on his hand, and he also bore marks of a dog-bite on his legs. He accounted for the latter by

saying that a farmer's big dog had worried him. A dentist was, however, called in, and he showed the court and jury conclusively that the prosecutor's little dog must have produced the leg wound. The murderer of a Herr and Frau Schneider was convicted at Vienna by means of a dentist's skill and an apple which had been bitten and left near the scene of the crime. The teeth of a man suspected fitted exactly with the bitten apple. But perhaps the most singular of all these points of detection by dentists was provided by the bringing to justice of the murderer of a banker in St. Petersburg. Just near the dead body was a much worn cigar-holder containing a half-smoked cigar. From the particular excellence of the cigar itself it was supposed at first that the banker must have been smoking it, and yet this very excellence tallied but strangely with the poor quality of the cigar-holder. Certain employes of the banker, to whom suspicion pointed rather vaguely, were, by the direction of a shrewd police magistrate, examined as to their teeth and jaws by a dentist, and the guilty man stood detected at once. He showed how the teeth of the accused fitted precisely into the marks on the well worn cigar-tube.—*Dental Record*.

A Practical Ice Dish.

Dr. Lester Keller (*Medical Council*, June) thus describes a practical dish for keeping crushed ice:

Take an ordinary unglazed, porous flower-pot that will hold two quarts or more, a quarter of a square yard of white flannel, a strong string, and a flat-bottomed dish, and you are ready.

Spread the flannel out over the top of the pot, then push the flannel down in the center so as to make it funnel-shaped, but do not let the flannel go clear to the bottom of the pot. Tie your string around the flannel and pot near the top, set your pot in the dish, and there you are.

Put your ice between two layers of stout

cloth, lay it on a solid surface, and pound it with the side of your hatchet until it is well crushed. Put your crushed ice in the funnel of flannel and you will be delighted to find that you can dip up a spoonful of ice without water. You will be surprised to find that in the hottest weather your supply of ice has lasted all night. The ice dish makes a very convenient place to put a glass of milk to keep it cool, if need be.—*New York Med. Jul.*

To Repair Vulcanite.

To properly repair vulcanite, in my opinion, there is only one way to have a neat, looking and substantial job, and that is to always remove every particle of old rubber from the plate and replace it with new rubber. A little practice will enable you to do it nearly as quickly, and you never have to turn out a patched plate.

W. R. CHRISTIAN.

A New Way of Preserving Meat.

A new method of preserving freshly killed meat has been discovered by a Danish zoologist, August Fjelstrup, who is the discoverer of condensing milk without the use of sugar. The system has been used in a Danish slaughter house for three months. The animal is first shot or stunned by a shot from a revolver in such a way as not to injure the brain proper. When the animal drops down senseless, an assistant cuts down over the heart and opens a ventricle, which allows the blood to flow out, the theory of this being that the decomposition of the blood is almost entirely responsible for the quick putrefaction of fresh meats. Immediately after the blood is let out a briny solution, which varies in strength according to the time the meat is to be kept, is injected by means of a powerful syringe through the other ventricle into the veins of the body. The whole process takes only a few minutes and the beef is ready for use and can be cut up at once.—*Scientific American*.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., JULY 28, 1898.

NO. 46.

PRESERVATION OF NATURAL TEETH

On a Conservative Basis of Treatment.

BY B. F. ARRINGTON, D.D.S.,
Goldsboro, N. C.

To take care of and perpetuate use of the natural teeth in comfort and without disfiguration should be the aim and purpose of every practitioner of dentistry, and for success a truly conservative line of treatment must be pursued, and if pursued consistently and systematically, the time is not far distant when pluggers will be less needed than at present, and ornamental display of gold in the mouth will be known of only as a thing of the past. Decay and loss of tooth structure to the extent of disfiguration will be but seldom if ever witnessed. Necrosis, exostosis and neuralgia, emanating from defective teeth, will pass from the minds of dentists, and there will be but little need of plate, crown and bridge-work.

The true science of dentistry unquestionably consists in the preservation of the natural teeth, and not in ornamental repair and substitution of artificial for natural. The later is purely mechanical and merits nothing more than well executed work on any other line of mechanism. The former preserves natural organs of the body in a comparatively normal state, precluding, if rightly prosecuted, the possibility of any great amount of loss of tooth structure, and rarely, if ever, loss of permanent teeth;

consequently no need of manipulative display of work in the mouth, which in a natural state is always more beautiful and healthful than when teeth are patched up and ornamented, a practice tolerated through weakness and vanity. For more effective service, and to accomplish best results on the highest plane of usefulness, it will be well to determine our latitude, boundary limit and sphere of action as a profession or as specialists.

In my judgment the teeth, osseous structure, and soft tissues of the mouth, "with their reflex and sympathetic manifestations and expressions," embrace the field of dentistry as a specialty, for that is what it is, and we can't make anything more of it. When we attempt to go beyond there is no limit. All ailments from crown of head to tip of toes could be embraced. It is right and proper that we shall have and recognize a boundary line, which shall be deemed the limit of our professional sphere of action, as do the aurists, oculists and other specialists. The human family would be better served, and dentistry as a specialty or profession would be strengthened and advanced in the estimation of all men. Preservation of the natural teeth should and must be our aim. The scope and latitude, seemingly limited, is quite sufficient to gratify the most ambitious and aspiring to be found in the ranks of the profession. Less ambition for notoriety and more ambition to be practically useful would prove elevating and ennobling, and doubtless more good would be accomplished in effort for the preservation of the natural teeth.

To care properly for the natural teeth we must commence with the infantile period, and for children in the higher circles of society I will suggest the free use of the gum lancet during the early period of teething. With the poorer laboring classes, especially in rural districts, the lancet is not so much needed, from the fact that by the time children of that class of society are four or five months old they have learned to eat and they are fed quite freely, and it is an established fact that the process of masticating lightens the discomfort from teething very greatly, and the mortality during the teething period is not so great as in wealthier communities and higher grades of society. It would not be extravagant to say, the death-rate during the teething period with the poorer, working classes, especially in the country, is not half that of children of parents of wealth and affluence in city, town or country. To confine children exclusively to nourishment from mother's milk, or milk of cows supplied by bottle until the age of twelve or fifteen months, is an absurdity, contrary to nature's laws and requirements, and is the cause of the death of thousands of infants annually, whose lives could be prolonged by a reasonable, judicious course of feeding during the early teething period. Consider the great relief often given by the simple operation of pressing the ball of the finger on the gums, and the avidity with which a child will grasp and convey to the mouth an ivory or rubber ring after having once experienced its soothing effects. Nature is nature, and nature's laws should never be obstructed or disregarded. The gum lancet is a blessing if freely used when needed; much good and no harm can come of the timely and right use of it. I will just here state a fact that is worthy of consideration and careful investigation. With the children of the negro race, and the poorer laboring class of the white population in the country, there is less malformation of the

maxillaries and less crowding and irregularity of the teeth than with the wealthier classes in the country, towns and cities. May not the practice of early masticating have something to do with it? I think it highly probable, because the practice is in conformity to nature's laws and requirements.

The development of maxillary arch for the reception of permanent teeth and their better preservation should never be lost sight of by those having oversight and care of them. I will state another fact for consideration. With the children of the negro race and the poorer classes of the white population of the South, especially in the country, temporary teeth and the six-year molars are seldom extracted; and with said classes the natural development of the dental arch and the non-crowding of the permanent teeth are more in accord with nature and more pleasing to the eye, and there is comparative freedom from contracted maxillaries and unsightly crowding of teeth. These facts I mention to arouse reflection and to encourage investigation. Mothers should be advised and instructed as to the care of children's teeth. The early and persistent use of the tooth-brush is all important for prevention of caries to a very great extent and preservation of the gums in a normal state. Children early educated in the use of the brush (morning and night), and who continue the practice, will but seldom experience gum trouble. A healthy gum is all important for healthy teeth. Teeth can be much decayed without injury to gums, but diseased gums are always hurtful to teeth, therefore should be watched carefully and preventive treatment practiced from earliest childhood.

In treating to preserve the temporary teeth until discarded from the jaw by natural process, to the age of six or seven, file, chisel and bur freely, and polish, and when necessary apply nit. silver, sul. acid or creosote. Such treatment can be easily

and effectively administered, and will successfully check and control decay, and preclude the possibility of return or continuation of decay, quite as effectually as the operation of excavating and filling. If decay presents that is past treating as above advised, and the operation, excavating and filling must be resorted to, in place of engine bur use chisels to shape the enamel edges of the cavity, and excavate cavity with spoon-shaped excavators.

Square-edged excavators should never be used; they will cause discomfort much more intense than is produced by the use of spoon-shaped excavators. Cavities prepared, fill with gutta-percha preferably, then cement, and further on cohesive tin. Never use gold or amalgam for filling short of fourteen or fifteen years of age, if you do, it will nine times out of ten prove objectionable, and a failure in less time than three years.

I question very much if any material is as desirable and beneficial for the comfortable preservation of the teeth from the age of ten to fifteen as cohesive tin. It is more soothing to sensitive dentine, makes a more perfectly water-tight filling, and can be inserted, condensed and finished in much less time and with less discomfort to patient than any other metal in use. In grinding surface cavities, the material (matters not how perfectly condensed) will generally, in the course of a few years or months, dip or saucer shape from margins of cavity to center, but never to the risk of increase of decay and loss of teeth. When necessary the loss can be easily restored with same material, or later on can be capped with gold or amalgam as may be preferred.

Cohesive tin as a filling material possesses great merit, though but little used. It was offered to the profession about twenty years ago by S. S. White, and was much appreciated by many who used it. For some cause it was withdrawn from the market, but will be replaced soon I hope. We should avoid extracting teeth for relief of

overcrowding until the age of thirteen or fourteen, and never under any circumstances extract the cuspids (expression teeth of the mouth) for correction of irregularity unless they are very defective. The removal of either the first bicuspid or lateral incisor will effect better results. The location and pointing of the cuspids is always to be considered, and should guide as to extraction of bicuspid or lateral. Never extract the temporary teeth in consequence of decay if possible to avoid it. Let the treatment be soothing and temporizing until in a condition to fill, and fill with a view to retain teeth in position until roots are absorbed and new teeth present. As a dentifrice for children, there is nothing better than precipitated chalk. It should be used freely, and caution should be observed not to wash it out of the mouth too thoroughly. Tooth-brushes should be carefully selected, the smaller in reason the better, with tufts of bristles set well apart, and medium or less than medium stiff. Ten or a dozen tufts of bristles in a brush for a child under ten or twelve years of age is quite sufficient. After years of maturity, circumstances must rule in relation to treating teeth and gums, and filling teeth. First, thought and attention should be given to the condition of the gums and the necks and roots of the teeth; then the crowns should be thoroughly cleaned and carefully inspected before any thought is given to filling, and before filling, if there are any teeth or roots to be extracted, proceed at once to remove them (always without anesthetics, if patient will permit). The depletion will put the teeth in a better condition for the operation of excavating, and when teeth are filled and gums are in a normal state there will be no local cause for gum irritation and discomfort, and the teeth filled will be better preserved and more satisfactory. Whenever superficial decay can be successfully removed, leaving a smooth, finely polished self-cleaning surface, it should be done in preference to excavating and filling, even when the

decay has invaded the dentine, provided the cavity is scooped or saucer-shaped, specially if located on the buccal or labial surface. After shaping and polishing such decay, if there is perceptible sensitiveness it is admissible and advisable to apply several times, at different sittings, scrapings of nit. silver and repolish with moistened pulv. pumice. Years afterwards no visible signs of redecay will be detected, nor is there trouble with pulp through thermal changes. No remedy known to dentists can so readily and effectually check and eradicate caries as *nitrate of silver* rightly and persistently applied. It is not one time in twenty that the discoloration produced by nitrate silver is objectionable or complained of, specially if iodide potassium is applied to remove stain.

(CONTINUED NEXT WEEK.)

Tin Fillings.

Good tin-foil in proper condition is cohesive where force is applied, and can be used for filling in the same manner in which cohesive gold is used, and a tin filling properly condensed, layer by layer, makes a solid mass which can be cut or filed. Cavities are generally prepared the same as for gold, then a strip or tape, narrower than the orifice, is folded once or twice at the end and placed where the filling is to be commenced, the tape being folded back and forth as the operation progresses by hand-mallet or hand-pressure; the finishing to be completed the same as for gold. For filling with a hand-mallet, use instruments with medium serrations, and a steady medium blow with a four-ounce mallet; in force of blow we are guided by thickness of tin, size of plugger, depth of serrations, strength of cavity walls and margins. The best results are only obtained by having absolute dryness.—*Ohio Dental Journal*.

Cocaine dissolved in chloroform, one grain to one-eighth ounce of chloroform, is good to extirpate pulps without pain.

WHY COAGULANTS DIFFUSE THROUGH DENTINE.

BY E. LAWLEY YORK, D.D.S.

About a year ago I had the honor to present to this society a paper on "The Diffusibility of Coagulants in Dentine." The deductions I drew and the experiments I exhibited at the time showed you conclusively that carbolic acid would diffuse through dentine. Hearing that I was continuing this line of investigation, the chairman of your Executive Committee did me the honor to request me to read another paper along the same lines, and from the generous and kindly manner in which you received my former effort, I consented. The following is the result of my experiments extending over the past year:

If you remember, I stated at that time that I found that there was greater rapidity in the diffusion of carbolic acid through the dentine of a tooth that had contained a putrescent pulp (four to eight hours). This occurred not once only but in every case, and it set me thinking. Why was there greater rapidity of diffusion in such a tooth and less in one that had contained up to the time of treatment a normal pulp; in the latter we had to deal with a tooth that had so far not undergone any pathological changes, either in the contents of the pulp chamber or the dentinal tubuli, all the albumin that is normally in a tooth being there intact, whereas in the tooth the pulp of which had died, and as a consequence undergone the process of putrefaction and the consequent formation of an innumerable number of end products, we had a totally different condition to deal with. In the first condition we might have an infinitesimal quantity of albumin to deal with, as I will show you later, whereas in the latter we have none, as I will now endeavor to demonstrate.

Many mouth bacteria, as well as the

majority of the pyogenic and putrefactive bacteria, have the faculty of dissolving coagulated albumin or albuminous substances, of peptonizing or converting them into soluble substances, just as albumin is converted into soluble peptones by the pepsin of the gastric juice. Micro-organisms nourish themselves only by substances in a state of solution, and if we present them solid substances they must first liquefy these substances before they can make any use of them for their own nourishment.

After the death of a pulp it is invaded by various bacteria, strictly saprogenic as well as pathogenic, the result of which is that the pulp becomes a foul, semi-fluid mass. This putrefactive decomposition of albuminous matter is effected by a great variety of micro-organisms and give rise to a great variety of products, some of which are volatile and are characterized by their offensive odors. This putrescence was the result of, first, the splitting up of the albumins into peptones, which, according to Flugge, may be effected by a number of micro-organisms; then the splitting up of the peptones into a large number of gases, acids, bases and salts. Among the products of putrefactive fermentation known to chemists are the following: Carbon dioxide, hydrogen, nitrogen, hydro-sulphuric acid, phosphureted hydrogen, methane, formic acid, acetic acid, butyric acid, valerianic acid, palmitic acid, crotonic acid, etc., etc. A few words on ptomaines may not be out of place. It is a name suggested by the Italian toxicologist, Selmi, and derived from the Greek word *πτωμα*, meaning a cadaver.

A ptomaine may be defined as an organic chemical compound, basic in character, and formed by the action of bacteria on nitrogenous matter. They have also been called animal alkaloids, but this is a misnomer, because, in the first place, some of them have been found in the putrefaction of vegetable matter, and, in the second place, the

term animal alkaloid is more properly restricted to the leucomaines, those basic substances which result from tissue metabolism. While some of the ptomaines are highly poisonous, this is not an essential property, and others are entirely inert. Hence the severe and complicated conditions following in some cases a blind abscess, or the opening of a putrescent pulp-canal, where we have exercised the greatest care. Since all putrefaction is due to the action of bacteria, it follows that all ptomaines result from the growth of these organisms. The kind of ptomaine formed will depend upon the individual bacterium engaged in its production, the nature of the material being acted upon, and the conditions under which the putrefaction goes on, such as the temperature, the amount of oxygen present, and the duration of the process. Ptomaines are the transition products in the process of putrefaction. They are temporary forms through which matter passes while it is being transformed by the activity of bacterial life from the organic to the inorganic state. Complex organic substances, such as muscle and brain, are broken up into less complex molecules, and so the process of chemical division goes on until the simple and well-known final products, carbonic acid, ammonia and water result.

It is an established fact, and will be borne out by the experiments which I will give you later, that the end products of albumin decomposition, or putrefaction, are no longer coagulable. I previously stated in this paper that the first step in the process of putrefaction is the transformation of the albumins into peptones. Now these peptones are not coagulable; for example, if you take pepsin and add it to serum albumin and allow it to digest at body temperature, you will find it is converted into peptones, etc., which are not coagulable. This is precisely the same condition that we find produced by the action of peptonizing bacteria upon proteid matter. (Here ex-

hibit tubes of decomposed serum albumin, and tubes of serum albumin to which has been added pepsin.) On the addition of carbolic acid, they do not coagulate.

Now, how does carbolic acid act upon these substances? Does it coagulate the orificial ends of the dentinal tubuli, and seal in all this poisonous matter? Most emphatically, no. The carbolic acid will penetrate as well as anything else you may use.

Let us now take another view of this much mooted question and see how the carbolic acid will act in the dentine of a tooth in which you have removed a normal pulp, one in which the albumin has not undergone decomposition. I stated earlier in my paper that carbolic acid diffused through the dentine of a tooth from which I had removed a normal pulp a trifle slower than one which contained a putrescent pulp. The reason for that was this: That carbolic acid did coagulate the trace of albumin that was there, but the former (carbolic acid) being in excess the coagulum was redissolved again. I will now show you capillary tubes filled with serum albumin (human), native albumin, and artificial serum albumin, and you will notice the coagulation proceeds slowly, and following behind a trifle slower you will see that the coagulum is being redissolved again. This is precisely the thing that occurs in the dentinal tubuli, only we have such a minute quantity of albumin in the tooth structure that it is hardly a factor.

To demonstrate the latter statement to your satisfaction I will give in detail some experiments made to determine the quantity of albumin in a tooth.

Determination of albumin in teeth. The teeth are first thoroughly scraped, removing as much of the adhering particles as possible. They are then carefully brushed with alcohol, which coagulates the albumin on exterior of the teeth. After the teeth are dry, they are finely pulverized.

To this pulverized substance (about ten grams) is added a decinormal sodium chloride solution (about twenty-five c. c.) alkalized with sodium carbonate. This is thoroughly agitated and allowed to stand for thirty-six hours. During this time the mixture is frequently shaken. It is then filtered until a clear filtrate is obtained, and washed. The filtrate is acidified with dil. acetic acid and brought to the boiling point. This coagulates the albumin. It is allowed to stand for some hours until the coagulum settles and the particles become agglutinated. It is then filtered upon a counterpoise filter. The precipitate is then washed until no reaction occurs upon the addition of sol. of silver nitrate.

The contents of the filter are then dried at a temperature of 110° C. for about thirty minutes, then placed in a desiccator and afterward weighed. The albumin is repeatedly dried until a constant weight is obtained.

The tooth substance, after being treated as above, was again subjected to the same process, but yielded only a faint trace of albumin, showing that practically all the albumin had been removed.

7.5 gms (115.74 grs.) yield .0028 gms.
($\frac{7}{100}$ gr) $\frac{3}{1000}$ of one per cent.

9.5 gms. (146.60. grs.) yield .0067 gms.
($\frac{9.5}{100}$ gr.) $\frac{1}{100}$ of one per cent.

11.5 gms. (177.46 grs.) yield .0060 gms.
($\frac{11.5}{100}$ gr.) $\frac{5}{100}$ of one per cent.

(1) These analyses of the teeth will clearly show you that the amount of albumin in a tooth is of too minute a quantity to be a factor. This applies to a tooth, the pulp of which was in a normal condition when analyzed. (2) A tooth the pulp of which has undergone the process of putrefaction or albumin decomposition. The end products are no longer coagulable (3) Had we as large an amount of albumin in a normal tooth as we have always been led to believe, the quantity of carbolic acid which would be accommodated in the pulp

chamber and canals would be quite sufficient to redissolve any coagulum that would be formed.

Recapitulation. I have shown you capillary tubes containing egg or native albumin, serum albumin (human), and artificial albumin, all of which coagulate in the presence of carbolic acid, and you will also observe again redissolves in an excess of carbolic acid. None of these have undergone decomposition. I have also shown you capillary tubes filled with decomposed serum albumin (human), and gelatin and serum albumin (human), acted upon by various pathogenic and mouth bacteria, none of which show any sign of coagulating in the presence of carbolic acid.

After getting these uniform results by repeated experiments hundreds of times and drawing my own deductions from them, I was naturally anxious to communicate with others who might have been over similar ground in search of other subjects. So I accordingly opened up a correspondence with Prof. Vaughn, of Ann Arbor, on the decomposition of albuminous substances and will give you his reply: "There can be no doubt that the end products of albumin decomposition are no longer coagulable."

Prof. Klebs, of world-wide reputation, also states that they are no longer coagulable, as also does Prof. Hektoen, of the bacteriological and pathological laboratories of the Rush Medical College.—*Dental Review*.

Ancient Dentistry.

After carefully looking the ground over, Dr. W. C. Barret says: We have arrived at the firm conclusion that there is nowhere any testimony that proves that teeth were artificially filled to secure their preservation earlier than the close of the seventeenth century. Indeed, we have never seen any evidence of the artificial filling of teeth that dates back more than one hundred and fifty years.

PROSTHESIS AND COMPENSATION.

In a large measure operative dentistry is looked upon by the layman as a branch of the profession which requires skill, and the operator frequently finds that his services are appreciated by the cheerfulness with which he is remunerated; but not so with the prosthetic branch. What we call the laity—those people who have not had the companionship of truly professional dentists—think that anybody can slap up a plate, the only question of choice being as to who will do it the cheapest, and they generally go from one to the other dentist until they find that out and settle on the cheapest man. Then, on the other hand, so many dentists boast that they abhor plate work, thus giving color to the popular idea that it is only the job of the artisan; and yet to the person who has lost his teeth the plate is just as important as the gold filling is to him who wishes to preserve his teeth, and when we consider facial expression, mastication, enunciation, and general comfort, prosthesis is entitled to as much respect as the operative branch; and would have it, if it were not for the ridiculously poor compensation dentists receive for such service.

In the *Indiana Dental Journal* Dr. H. A. Smith attributes this state of things to the prevailing custom of having a set fee for plates of the same sort, while their construction may involve altogether a different degree of skill or require a greater or less time for completion. He very properly takes the ground that the dentist's compensation should be commensurate with the skill and time employed in prosthetic as well as in any other branch of his profession. He says:

"The subject for the evening, prosthetic dentistry, suggests the oft-repeated remark by dentists, 'There is nothing in the practice of prosthetic dentistry.' Unfortunately,

it is true that the dentist does not, as a rule, receive just compensation for his efforts in this department of practice.

"Inquiry as to the cause of this condition of things suggests, first, that a uniform fee for 'sets of teeth' of the same kind, as is the practice of many dentists, is unreasonable, not businesslike, and a positive injury, not only to the individual practitioner, but to the profession generally. A fixed fee for this service implies that a set of artificial teeth is a product that can be turned out in a given time and at a uniform cost. The truth is, however, that every set of teeth, especially a full denture, is more or less an experiment. There is, in the first place, the element of uncertainty as to adaptation. Next, the idiosyncrasy of the patient must be taken into account, and then the sisters and the cousins and the aunts frequently have to be considered. Every experienced dentist knows that it is often worth two or three times as much in money to make similar dentures for two different patients. Time and skill are the elements that enter into the value of productions of this character, and they should be paid for in proportion to their expenditure.

"Second. Is it in accordance with correct business methods to always charge the rich and poor alike? The inability of a class to pay for our services may be in a measure compensated for by asking an increased fee from the well-to-do class. This is the custom usually followed in medicine and surgery and in the law. Even the minister expects a larger contribution from the rich member of his church than from the poor member, although the spiritual welfare of the rich and poor are of equal importance.

"The immediate effect of the adoption of a gradation in fees in prosthetic work would be to bring up the quality of these operations. Opulent patients would receive our best efforts—that is, good working dentures in combination with the essential artistic features, while those less favored with

worldly goods would get from our hands good, practical work, with the artistic element not wholly left out, as now frequently is the case.

"In order that the practice of prosthetic dentistry may be made compensating, both the dentist and his patient should be brought to realize fully the old familiar truth, 'The laborer is worthy of his hire.'

Dental Faculties' Meeting.

The annual meeting of the National Association of Dental Faculties will be held in the Mercer Hotel, at Omaha, beginning Friday, Aug. 26, at 2 p. m.

It is to be hoped that all members of the association will be present at that time.

The Executive Committee will meet on the preceding Thursday, at 2 p. m.

Colleges are notified to present their business at the first session of the committee.

By order of JONATHAN TAFT,
B. HOLLY SMITH, Chair'n Ex. Com.
Secretary.

Secretaries of State Dental Societies, Please Take Notice.

We are requested to announce that Dr. Wm. Ernest Walker, assistant secretary National Dental Association, has been authorized to take charge of reports from State societies, prepared in accordance with Resolution X., to which attention was directed in our issue of June 30. These reports should be sent to Dr. Walker not later than Aug. 9, "three weeks before the date of the annual meeting," as per resolution referred to.

The article on another page on "Why Coagulants Diffuse through Dentine" is good reading at this time. The writer has certainly thrown some light on the subject—a subject that has been handled pro and con for some years. Read the article carefully.

THE
American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Subscription **\$2.00** per year; **\$1.00** for six months—Including Canada and Mexico; other countries **\$3.00** per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, July 28, 1898.

Ichthyol.

Some time since a case presented with an abscess, which seemed to be coming to a point externally. The abscess had started from the root of a first molar on the lower jaw, and had burrowed down through the swollen tissue until only a thin layer of solid tissue existed between the forming pus and the outer surface, the thinnest point being just under the submaxillary gland. The abscess was thoroughly lanced, and the cavity freed of pus by injections of three per cent. pyrozone, but at each subsequent sitting the pus had burrowed further down and the layer of solid tissue was perceptibly thinner.

It was now decided to use a bandage in conjunction with an ichthyol poultice, to support the parts and try to prevent an external opening. Accordingly a small piece of linen was cut to cover the affected region and smeared thickly with ichthyol.

This being stuck on, the parts were tightly bandaged by passing a bandage over the head and under the chin, supporting the parts and holding the poultice in place. The results were most gratifying, besides the abortive effect of the ichthyol on the abscess; after a few hours it had become dried out, leaving stiff, hard support, which had been exactly moulded to the contour of the parts. It seemed the only way by which the external breaking of the abscess could be avoided.

Later we notice that ichthyol has been employed by Dr. H. Floris in treating pyorrhea and painful receded gums.

In the former case he uses it full strength in the pockets, and afterwards syringes with a fifty per cent. solution. He has also used it as a tampon in the sockets of extracted teeth to prevent hemorrhage.

H. H. JOHNSON.

To Anneal Piano Wire Broaches.

To anneal piano wire breaches so they can be tied in a knot, use a brass or iron tube with one end closed, into which place the wire to be annealed and fill with pumice-stone the interstices. After closing the end heat the whole to a dull red with the blow-pipe and allow it to cool slowly. The wire can be filed to the proper taper and will be almost indestructible.

R. W. MORSE.

Lansing, Mich.

Notice to Delegates.

Delegates elected by the State societies to the meeting of the National Dental Association at Omaha, and who now find they are prepared to attend the meeting, should obtain their credentials from the president or secretary of their society, without further delay. We are requested to call attention to the above reminder.

Intradental Band—Inner Band— Inside Band, Etc. Credit to Whom Credit is Due.

It so happens in life that great minds often conceive the same original idea at the same time, without either being aware of the fact, until the resulting products are brought together and compared. It may happen that like ideas may be conceived by different minds at different periods of time, and each be ignorant of the work of the other. The last inventor is due credit for originality as far as he individually is concerned, but the first deserves credit as far as the world is concerned. The laws governing patents and patent offices of all countries so contrive it.

The leading article in the *Dental Digest* for June, 1898, is headed: "Use of an Intradental Band," by B. J. Cigrand, D.D.S., Chicago. Read before the Iowa State Dental Society, May, 1898. In this article originality is not positively claimed by the essayist, for the idea of an *inner band* or *inside band*, but for the coinage of the words, "intradental," denoting an inner, and "circumdental," denoting an outer band. The writer does not *himself* say to whom credit is due for the idea, but embodied in the same article is a copied extract of an article by Dr. H. J. Goslee, in which the essayist allows himself to receive credit for both the idea of the band and the coined words describing it, as in one place he alludes to it as "Dr. Cigrand's system of the intradental band."

The terms intradental and circumdental are appropriate, very pleasing to the ear, and as far as we know, are to be credited to Dr. Cigrand, but the idea of the use of an inside band in crown-work, is not a new idea, and priority of invention will have to be proven before he can be credited with it. We would call attention to the following prior claims for originality in the construction of inner or intradental bands in crown work.

In the *Dental Cosmos*, page 233, 1889, is an article thoroughly illustrated, describing accurately, the method as used by Dr. Cigrand, written by H. F. Maasch, of the New York College of Dentistry. Dr. Maasch describes the cutting of the groove with the trephines and in every way is substantially the same.

In the *Busy Dentist*, July, 1894, and also in the *Southern Dental Journal*, is an article by Dr. J. H. Crossland, of Montgomery, Ala., read before the Alabama State Dental Society, describing accurately the same method of constructing a crown of the Richmond type with an "inside band," just the same as Dr. Cigrand describes, except that the groove is made by drilling a series of small holes in the face of the root, describing the outline of the band and afterward cutting out the narrow sections between with a small bur, completing the groove. In some instances this would be better than the trephine method, because in oblong-shaped roots, as cuspids and bicuspid, the groove would be equidistant from the periphery at all points. Dr. Crossland also advocated the placing of four small posts around the larger or central post, instead of the "inside band." Dr. Crossland had never heard of the Maasch method and thought the idea was original with him. He did not describe the setting of a Logan crown in this manner.

A modification of the Maasch crown, in which the "inner band" projects above the surface of the end of the root entering the hollow face of the crown, devised by Dr. Jennings, of Cleveland, Ohio, was described and illustrated in the *Dental Cosmos*, September, 1892.

In a paper read before the Southern Branch of the National, at St. Augustine, in February, 1898, Dr. W. E. Walker describes a method of mounting a Logan crown with an "inner" band. The construction of the groove and band being substantially the same as the others, which he

had not heard of at the time of writing the paper. He had also been using and teaching the method for some time prior to the time of writing the paper. He only claims originality for his method of adapting a Logan crown with the "inner band." An abstract of Dr. Walker's paper was published in *THE AMERICAN DENTAL WEEKLY*, No. 29, page 354.

We have taken the trouble to give these facts in detail that credit may be given as much as possible where it is due. Verily, before laying claim to a supposed original idea in dentistry in this day, involving mechanics, it would be best to search the archives thoroughly.

H. H. JOHNSON.

The Status of the Dental Profession.

117 WEST NINETY-THIRD STREET,
July 1, 1898.

To the Editor of the New York Medical Journal:

SIR:—In the June 25th number of the *New York Medical Journal* I notice that representation has been given on the British Medical Council to the dental profession. This is a long delayed and justly given honor to a branch of medicine and surgery. Until within the last few years such recognition was not deserved, but now, especially in New York State, where education in dentistry requires three years of study, necessitating a complete and comprehensive study of anatomy and the dissection of the whole body, complete physiology instead of the cursory study of the physiology of digestion, materia medica and therapeutics in their broader relations to physiology and pathology, chemistry broader than simple metallurgy, and operative and mechanical dentistry simply as an addendum to the very thorough pursuit of medical branches, it is time that some such recognition should be given here. The dental graduate of

New York State to-day is a much more thoroughly educated medical man than the graduate of our medical college five years ago. Four years' intimate association with dental education has clearly demonstrated this to my positive satisfaction.

DWIGHT L. HUBBARD, M. D.

Aluminum Crowns.

A rather funny experience is related in an article by Dr. A. E. Preston, in *Dental Cosmos*, concerning an aluminum crown.

He had made a crown which had given satisfaction for some time, when one day the lady returned, and on examination a hole was found worn in it. It was decided to mend the hole with amalgam, and accordingly it was enlarged and the proper undercuts made, and all filled with amalgam.

That afternoon the patient returned with the following story told by herself: That afternoon she sat down to talk with her husband, and remarked that the crown was loose. She placed her fingers in her mouth and removed it, but immediately dropped it, exclaiming, "Oh! it's hot. It burned me." Her husband, believing she was joking, also picked it up, and immediately dropped it, exclaiming, "Gee whiz! it is hot."

The contact with the atmosphere evidently must have set up some chemical action from the effect of the mercury in the amalgam, but just what it was we are unable to say.

It is an interesting case, to say the least of it, and will serve to draw attention to the combination of the two metals. J.

Make a wafer of gutta-percha, and moisten one side with eucalyptol. Lay with moistened side down over point of near exposure and cover with oxiphosphate. When this is hardened fill as desired.

Bleaching Teeth.

From current dental literature it appears that pyrozone has about superseded all other agents for bleaching teeth. This is not remarkable to those who have tried it for the purpose. The high per cent. solutions are generally employed, but even the three per cent. aqueous solution will produce highly satisfactory results if it is applied a few times on a pledget of cotton at different sittings. Below is given a little contribution on the subject by Dr. G. S. Allan, taken from the *International Dental Journal*:

"Many use a twenty-five per cent. ethereal solution and some a five per cent. for this purpose. Others still claim they obtain a more prompt and effective action by means of the electric (cataphoric) current. So far as I can see, there is nothing gained by using the cataphoric current for bleaching purposes. There is no advantage in using the twenty-five per cent. solution of hydrogen dioxide, and I always employ the five per cent. solution. If a five per cent. solution is used the evaporation soon reduces it to a twenty-five per cent. solution, and by repeatedly swabbing out the cavity the desired change in color can be quickly obtained. I do not know that I have ever failed in my effort to bring a discolored tooth back to its normal color. It is well to be cautious and stop a little short of the full measure of success. Then seal a small portion of the five per cent. solution in the tooth for a day, and usually no further treatment will be required. Bleaching can be, and often is, overdone."

The editors of the monthlies are waking up on the question of dentists in the army and navy. Dr. Taft has an editorial on the subject; Dr. Harlan has one. Who next?

If you wish to go on a through sleeper from Atlanta via Nashville to Omaha, write at once to THE WEEKLY. It requires 18 passengers for a through sleeper.

Virtue Has its Own Reward.

Here is something, quoted from *Love's Medical Mirror* for July, that the genial doctor "picked up" at the Denver meeting: A bright little Denver boy, one of a class of children of six or eight years old who had been requested by their teacher to write a story, selecting their own subjects, and whose compositions were not to be subject to revision by the teacher, but to be read before the children's parents exactly as written, submitted the following:

Virtue Has its Own Reward.—A poor young man fell in love with the daughter of a rich lady who kept a candy shop. The poor young man could not marry the rich candy lady's daughter because he had not money enough to buy furniture. A wicked man offered to give the young man twenty-five dollars if he would become a drunkard. The young man wanted the money very much so he could marry the rich candy lady's daughter, but when he got to the saloon he turned to the wicked man and said: "I will not become a drunkard even for great riches. Get thee behind me, Satan." On his way home he found a pocketbook containing a million dollars in gold. Then the young lady consented to marry him.

They had a beautiful wedding, and the next day they had twins. Thus, you see, "virtue has its own reward."—*New York Medical Journal*.

Tin Coating for Plaster Casts.

Reduce ordinary collodion with about three times its bulk of ether, and add powdered tin till the solution is well impregnated with the metal. Applied with a brush, an even coating of tin is formed on the model, so dense as to closely resemble tin-foil and so firm as not to be detached by boiling water. A plate vulcanized on a model thus prepared is as readily cleaned with a coarse brush as though made in a metallic mold.—*Chas. P. Alker in The Dental Office and Laboratory*.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., AUGUST 4, 1898.

NO. 47.

PRESERVATION OF NATURAL TEETH

On a Conservative Basis of Treatment.

BY B. F. ARRINGTON, D.D.S.,
Goldsboro, N. C.

Concluded from Page 557.

Before filling cavities with gold or any other material, the first and most important matter for consideration is excavating and thorough preparation of cavities. The preparation of cavities should be the same in all cases, let us fill with what we may. Never spare defective walls, leaky fissures, nor softened dentine. There is nothing in the practice of dentistry that calls for more heroic application of instrument and painstaking than the operation of excavating for filling. To avoid discomfort to patient during process of excavating and preparing cavities for filling, keep cavities *flooded* with cold water, and be careful never to apply excavator or bur to a dry cavity. Round or spoon-shaped excavators should always be given preference over square edge. There are several reasons why square edge excavators should be discarded. In the use of them it requires greater length of time to prepare a cavity, enamel walls are often weakened by them, even when most carefully manipulated, and the discomfort experienced by patient is greatly increased. No one can realize the advantage of *flood-ing* cavities when excavating until tested. Testing and experimenting on all lines of

practice is a privilege and a duty, and should be freely indulged.

To remove decay without much discomfort, use heavy shank, sharp excavators, and when first applied use all the force of pressure in cutting the size of excavator will admit of. The more force applied with excavator or bur the less discomfort to patient. A cavity well flooded, shanks of excavator heavy and stiff, and cutting edge sharp and forcibly applied, are the best and surest safeguards against discomfort in preparation of cavities. Such practice, strictly followed, not one time in twenty will a patient complain, and when they do, suspend operation, mop the wall of cavity with creosote and oil of cinnamon, equal parts, and the base with scrapings of nitrate of silver and close with beeswax or cotton and sandarac for several hours, and all will be favorable for completion of the operation of excavating, and there will be no further complaint.

The use of engine bur in preparation of cavities is much more unpleasant to patient than when hand burs are used, owing I presume, to deficiency of force. It is often the case, when cavities are very sensitive, that two or three quick twirls of a sharp bur forcibly applied will entirely remove all sensitiveness and the after work of excavating with spoon-shaped excavators is not at all unpleasant. In deep cavities, with near approach to pulp, mop walls with creosote and cinnamon, and base with nitrate of silver, as above mentioned, then adjust over the base a piece of sheet lead (thickness to suit) and introduce gutta-percha, packing

and condensing carefully, until cavity is half or two-thirds full, then finish with gold or amalgam as preferred. If with amalgam be careful to select a make in which *tin largely preponderates*. Tin, silver and zinc, properly proportioned is an excellent combine for amalgam that will give almost universal satisfaction; it preserves color equal to any, shrinks but little and wears well. There are many good alloys on the market, in the use of which good results may be obtained, but excellence in the make up of an alloy can never be attained short of a decided preponderance of tin, which as a metal, singly, is the best of all metals for preservation of tooth structure. If two approximate cavities opposite are to be filled with metal, both should be filled with same—gold, tin or amalgam—then there will not be any probability of after trouble through galvanic action. To render best service in the preservation of teeth by filling, it is all important that we shall be *eclectic* in the selection of material, and never ignore or discard any material from prejudice. All in use possess merit, and each can be used to superior advantage under some circumstances, if wisely appropriated and rightly manipulated. Use what we may for filling, the thing important is to guard against prejudice and abuses. No one can at first glance of decay determine what material shall be used for best preservation of the tooth. The location of cavity, extent of decay, approach to pulp, texture of tooth, exposure of material when filled, age of patient, temperament, etc., must be rightly and carefully considered. The wiser and safest procedure for sound practice and good results is never to decide as to material to be used for filling until cavities are prepared, then as judgment directs so act, and in a large majority of cases patients will be better served and more teeth will be preserved in a comfortable condition for use than when action is based upon a desire for display of gold, which should never be dis-

played in the mouth if possible to avoid it. In the use of gold, if skillfully manipulated, it matters but little whether it be cylinders, rope, ribbon, pellets or sponge, a fair result may be anticipated. Soft gold is superior to adhesive, except for surface finish and contouring, and should always be given preference. In shallow cavities gold from base to finish is admissible, but in deep cavities it is safest and best practice to fill half or two-thirds full with gutta-percha or cohesive tin, as security against the effect of thermal changes. At cervical section of molar or bicuspid approximal cavities, it is good practice to begin with gutta-percha, or tin cylinders, and finish with gold or amalgam. Experience has long since established the fact that in such cases either tin or gutta-percha is better than gold or amalgam. In filling to preserve teeth, *conservatism* and *eclecticism* should be the ruling principle and true line of action with us; otherwise our services are unreliable for best results. In the use of gutta-percha, the idea that it is only suitable for temporary filling, and must be so used, should be discarded. It possesses very great merit as a permanent filling material if rightly used, and so it is with some cements. In approximal, buccal and labial cavities, extending under gum margin, I have realized, from experience, that gutta-percha is more tooth-preserving and reliable than gold or amalgam. It should never be inserted hurriedly or in bulk; small pieces (slightly heated) from base to finish, and each piece thoroughly condensed to completion of filling is requisite for good results. Like amalgam, its abuse has created prejudice and its true worth is not yet known and appreciated. The general abuse of amalgam in the non-acceptance of it as a material of intrinsic worth for preservation of teeth, and a disposition on the part of many dentists to regard and pronounce it of secondary and limited importance and unworthy of best and highest order of manipulative skill in filling

and finish, weakens its merit as a filling material with many dentists. Equity demands that excellence of manipulative ability should be appropriated to amalgam for best results, as to gold, and those who refuse to so regard and treat the subject should never presume to use amalgam, for their use of it will be abusive and will increase prejudice; and so with any material not rightly appreciated and indifferently used as a sort of makeshift. Whatever material is used for filling teeth should be used to very best advantage possible, with good judgment and all the manipulative skill at command, or we fall short of performing our duty honestly as dentists, and are censurable.

In regard to treatment of pulps, my experience, experimentally, has been extensive, but results have not been satisfactory; therefore I now seldom treat with a view to capping, but devitalize and remove as effectively as possible, and never attempt removal, except in straight root teeth, earlier than eight or ten days after devitalizing; then the operation of removal of pulp and nerve filaments entire is much more easily accomplished; the tissues have softened and will leave the walls readily, and no discomfort to patient when nerve extractors and broaches are applied. As soon as root-canals are in a suitable condition, fill with beeswax and cotton fiber, then fill pulp chamber entire and cavity half or two-thirds full of cement or gutta-percha and finish with gold or amalgam, as may be deemed best. I frequently fill pulp chamber and cavity to completion with gutta-percha, and in the course of six or twelve months cover if necessary, with gold or amalgam.

With equal parts of creosote and oil of cinnamon, or dilute sul. acid judiciously applied in roots through the apex and into gum tissue, when necessary, I can generally accomplish all that is requisite or can be accomplished by treatment in preparation for root-filling. It is best never to attempt to fill root-canals until all unhealthy matter

has been removed and offensive odors abate; then it is safe to fill immediately, and if there is abscess, treat through the gum after filling. There are many lines of treatment recommended, and many remedies suggested. I have tried many, but have never obtained as satisfactory results as with the few above named. Too many remedies are often more hurtful, and prove less effective than fewer. My experience sustains me in the belief that with one dozen, or less, well selected remedies, all the diseases coming within the legitimate range of dental practice can be as successfully treated as with more.

To devitalize pulp, after having tried many remedies, I now use but one, *arsenic*; it is always reliable and seldom ever fails to effect the desired result; from the thirtieth to fortieth of a grain is quite sufficient for one application, and it is but seldom that more than one application is requisite, if applied as follows: Prepare cavity by removal of accumulated matter, dry with bibulous paper, the best of all absorbents, then a small pellet of cotton slightly moistened with creosote and cinnamon or camphor-phenique, held with pliers; touch to the arsenic and convey to cavity and press to one side rather than directly over the pulp, specially if pulp is exposed; place a piece of beeswax over the pellet of cotton and flow with a warm instrument suited to locality of cavity; let remain ten or twelve hours, remove and let tooth so remain until time to extirpate. Arsenic so applied is effective and but seldom causes any discomfort. I have no recollection of ever having witnessed injury to alveolar process or soft tissues from application of arsenic.

For root-filling I advise as above mentioned, use of beeswax and cotton fiber, nothing better or more easily introduced, and always free from evil consequences. I am not an advocate of root-filling under all circumstances, as some advocate, from the fact that I have many times, and at one period of my practice for several years

without variation, omitted root-filling, except in cases where there was denudation of apex; and the results were as entirely satisfactory as if the roots had been filled. Never fail to treat and prepare root-canals as thoroughly as if to be filled. The cleaning, disinfecting, etc., is all important and should not be slighted. Experience and careful observation of results sustains me in my convictions and practice. I question very much if one root-canal in twenty, upon an average, is ever filled perfectly from apex to pulp-chamber, even by those who contend most strenuously for the practice. Before cavities are excavated and filled, all deposits should be removed from crowns and roots, and all the teeth thoroughly cleaned, and if the gums are diseased they should be treated. That troublesome disease, pyorrhea alveolaris, can be easily checked and obliterated if carefully treated in the early stages. There is no reason why teeth should ever loosen from the effects of pyorrhea with persons who have their teeth regularly looked after by a dentist, and so with caries, it should never advance to the extent of requiring large or even medium-size fillings. Thoughtfulness on the part of the patient and watchfulness on the part of the dentist would preserve in a normal state many teeth, and keep the gums in a healthy condition.

As regards material for filling cavities for the preservation of teeth, I advise that the principle of eclecticism should prevail and rule, or we will fail of the high mark of excellence we should be ambitious to attain. All filling material now to be found on the market is worthy of favorable consideration. The poorest of them can be used to advantage under some circumstances.

It is best, right and proper that as dentists we should test all things (material) favorably recommended, and never discard any from prejudice, and whatever we consent to use, use to best advantage possible,

with all the skill at our command. To do less would be unprofessional. It is not very creditable to a dentist to make a run on gold fillings and finish beautifully for public display and admiration (some do), and make a botch of fillings in the use of other material. All should be treated alike, with ambition to do for the best under all circumstances, and with whatever material good judgment may dictate use of. More teeth would be saved and dentists as a whole would be better dentists and more appreciated. More thought given to the preservation of the natural crowns of teeth and less consideration for gold crowns, would very greatly enhance the possibility of preserving the natural teeth, many mouths would present less the appearance of a jewelry case, and dentistry would be moving upon a higher plane of progress and usefulness, and conservatism in practice would be more recognizable than at present.

Anesthetics in dentistry, in my judgment, has proven a curse rather than a blessing, and should be ignored and discarded. In consequence of the abusive use of anesthetics millions of teeth are recklessly extracted annually, that could and should be treated and preserved for many years, and for masticating would serve infinitely a better purpose than artificial substitutes. I hold it to be the duty of every dentist to condemn every feature in practice that tends to cause or admit of neglect of proper care and preservation of the natural teeth, and it is equally a professional duty to encourage universally the preservation of the natural rather than neglect and sacrifice with a view to substitution of artificial.

An effort is made through treatment to preserve natural eyes, so it should be in effort to preserve natural teeth, and let extraction be the last alternative for relief. Until this is done and is accepted as the correct line of action for universal procedure, the profession will not be moving

towards a higher plane of advance and usefulness.

The most beautiful sets of artificial dentures, bridge-work and crowning with gold, cannot remedy the evil and make amend for the loss of natural teeth that could be preserved in comfort and utilized to great advantage, if timely treated on a conservative basis.

Plates, bridge-work and crowning, when most beautifully and perfectly executed, like fancy fillings, is only a feature of manipulative skill in the art of mechanics. Treatment and preservation of the natural teeth, as other organs of the body, is action in conformity to general laws and principles of the healing art never to be ignored. Choose of the two, the one which thou thinkest best, ever considering and rightly regarding the interest of the afflicted, and duty to fellow man.

Thiersch's Solution.

It is very often that we see mention of this solution. The *New York Medical Journal* gives this as the formula:

Salicylic acid	2 parts
Boric acid	12 parts
Hot water	1,000 parts

A Polisher.

Instead of winding cotton on the end of an instrument as a polisher, unwaxed floss silk is better. It is more durable than cotton and it will not turn on the instrument.

STIFF.

Richmond, Va.

We have on our desk a book by W. C. Barrett, on Oral Pathology and Practice which, on a cursory glance, impresses us as a book of great value. In a later issue we will tell more about it, as it will be an absolute pleasure to peruse it. It is not like the other works on pathology—there is an individuality about it that is truly refreshing.

THEORIES.

Strange theories are sometimes advanced. The past, for lack of more general information, may have formulated more strange theories than the present age, but we are not yet free from great errors in accounting for causes.

Mr. Headridge, in the *British Journal of Dental Science*, very pleasantly shows up some of the vague theories, which are given below:

"If we take the eruption of the teeth we find various theories, but until Mr. Constant pointed out the blood pressure as a factor to be considered, we had not even a decent working hypothesis to explain the eruption of the teeth. I think you must admit that it was no particular benefit to the profession that such theories as the bone current theory, the contraction of the dental sac, and the bung-in-the-barrel theory should ever have been allowed to obtain prominence in dental literature.

"In connection with caries, we have had at different times several theories propounded, but these have gradually been set on one side, and we have generally accepted the theory that bacteria cause the destruction of the dentine. This theory seems to fit in with practically all the facts so far observed. Accepting this theory that bacteria are the cause of caries, and that these bacteria gain access to the dentine wherever the enamel is faulty, or has been removed, and that enamel is destroyed by the acid fermentation of food, we may pass on to the consideration of theories in connection with the prevention of decay.

"We know that where the gum is swollen and inflamed caries frequently occurs; tacked on to this we have the statement that the mucous membrane when irritated throws out a secretion capable of injuring susceptible teeth. Surely there is no necessity to assume that any secretion thrown out by the gum is of itself harmful to the

teeth. The swollen edge of the gum is quite sufficient to hold scraps of food, especially carbohydrates in contact with the teeth, and with the assistance of saliva and bacteria, lactic acid is formed. Further, if any secretion is thrown out by an inflamed gum, there is every probability of it being serum, which might supply the small amount of proteid matter necessary for the life of lactic acid bacteria, or the alkaline serum in excess might neutralize the lactic acid. If the latter were so, the secretion from the gum would rather prevent decay than be harmful to the teeth.

"We now come to the means taken for preventing decay, and here one might say a few words in connection with the six year molar question, or more broadly, the extraction of four molars or four bicuspid as a means of preventing decay.

"Let us take for example a child about 14 years of age, in whose mouth decay has run riot.

"Decay may have progressed to a greater extent on the six year molars than on any of the other teeth.

"The usual advice is extract the six year molars and fill the other teeth. Suppose the operations are performed satisfactorily; when the child is seen in the course of the next year or so, the remark will frequently be that the extraction of the teeth has been of great value in allowing the teeth to separate, and so preventing the recurrence of decay round the fillings which have been put in.

"I am not cavilling with the operation, but the point which I should like to question is the theory that the separation of the teeth has been the principal factor in preventing the recurrence of decay. Before the operation, the six year molars had been in use about eight years, and the other teeth down to two years for the twelve year molars, that is to say lactic acid and bacteria have had the time (two to eight years) to find out the most faulty spots on the teeth and there set up caries. After

the extraction of the six year molars, we may say that the teeth have been under the influence of bacteria and lactic acid for say an average of four years; consequently, if they are only properly filled, there ought to be very little recurrence of decay any time under four years with or without the questionable advantage of slight separation of the anterior teeth.

"From these considerations it seems that one is quite justified in doubting if we are right in the assumption that the separation of the front teeth, after extraction of the six year molars, is of the importance which has been ascribed to it in the prevention of decay. Of course, I have not been considering the other reasons which might make it advisable to extract, such as removing a tooth which is very likely to be a source of future trouble, or the advantage of giving plenty of room for the eruption of the wisdom teeth.

"I have only used this as an example to show how ready we are to accept a theory which, at first sight, seems plausible, and thus ignoring other explanations which may be equally probable.

"It is generally admitted that it is difficult to form a water-tight plug out of the mouth with amalgam, or cohesive gold, consequently it must be much more so in the mouth; also that non-cohesive gold fillings are often removed when they seem saturated with the fluids of the mouth, yet there has been no decay in the cavity. In drilling out old white cement fillings, one is generally conscious that they are saturated with offensive organic matter. We assume that bacteria can gain access to the dentine through any crack which is permeable to water, yet these faulty fillings prevent decay for a number of years. White cement is credited with preventing decay better than any other filling, but it surely must be porous to bacteria to a certain extent, if an old filling contains organic matter.

"No one seems to have been tempted to offer theoretical explanations for these considerations.

"Tin and gold in intimate combination is a very favorite filling with many operators. The softness of this material, no doubt, makes it work easier than soft gold, and that would account for many operators' preferring it. Some change takes place in the filling in the mouth. Its admirers put forward the hypothesis that the tin oxidizes, and consequently the filling must expand when the particular black change occurs. This assumption is very probably groundless. Stannic oxide is not black, neither is the sulphide. If the tin were converted into either of these salts, the filling would no longer be coherent, for both sulphide and oxide of tin are fine powders.

"Still, the belief that the virtues of this filling are due to expansion seems to have very wide credence, although, as far as I can gather, this hypothesis is based on no experimental data.

"In connection with gold filling there are two little bits of theoretical arguing: one is that during a filling one ought to only use pluggers all having the same pitch of serrations, so that the depressions caused by the plugger in one piece of gold should be exactly filled up by the next piece being forced into them. That is all very well, but to assume that this could not be so well done by a plugger with either larger or smaller serrations is somewhat absurd. Of similarly doubtful value is the assumption that using a burnisher on a cohesive gold filling will pull the filling away from the walls at one point while burnishing it down at another.

"Passing on to amalgams, one may mention the spheroidal tendency theory, which seems to have been entirely shelved by Dr. Black's researches.

"Talking about amalgams, one is certain to come on copper amalgam before long.

"Three or four years ago the extent of our knowledge was that copper amalgam preserved teeth, and in many cases wore out

in time. Some said copper preserved teeth well, and others denied that statement.

"Its admirers claimed that the virtues of copper depended on the salts of copper, which passed into the dentine and arrested decay, and also that nearly exposed pulps tolerated copper better than any other metal filling.

"I am afraid the action of the copper salts is, to a certain extent, hypothetical. This point seems to rest at present only on the fact that the dentine is stained, more or less deeply, and on the stain on the other teeth. This latter seems to be more of a deposit than an actual stain, for it wears off after the copper filling has been removed.

"I do not think there is any definite analysis to prove that there is copper in the deeply stained dentine.

"One would expect that a hypothesis which is so widely believed would be better supported by facts.

"As regards the question of the pulp tolerating copper better than any other metal filling, this must be considered as pure hypothesis. It is impossible to either prove or disprove it. A statement like this is decidedly harmful; it becomes accepted as fact, though not based upon any conclusive arguments. It is handed on from one to another, rarely questioned, but when put into actual practice leads frequently to disastrous results.

"The one solid fact we know about copper is that according to Dr. Black's experiments copper does not contract; possibly we may find that this is its only virtue.

"Theoretically, one might be inclined to believe that an accidentally exposed pulp, treated by capping, ought to recover, if not too much injured. Practically, there is room for serious doubt as to whether any injured pulp ever does recover.

"We have many observations on different methods of capping pulps, but one generally finds that these observations have extended from a year to eighteen months, and, of

course, during that time the accounts are glowing.

"Very many pulps (I certainly do not say all) nearly exposed will tolerate a filling of oxyphosphate pure and simple, care being taken not to exert pressure on the pulp in the act of filling.

"These teeth remain perfectly comfortable for a year or so, even up to five years, and then without any apparent cause inflammation may occur, which results on death of the pulp.

"This is the description of the effects one does not get described by the supporters of the different methods of capping exposed pulps. What one usually finds is a long list of successes observed only for a few months to a year, and from this list is drawn the deduction that the particular method of capping is a success.

"Another method of treating an exposed pulp is by the application of arsenic. I think it is generally believed that a chronically inflamed pulp is difficult to destroy with arsenic.

"One is even advised to allay the inflammation by application of sedatives before applying the poison. The theoretical explanation of the difficulty is that the dilated blood-vessels will carry off the poison without it having its customary effect on the pulp as a whole. This seems rather a wild hypothesis, yet I believe it does obtain a certain amount of belief. It seems entirely unnecessary, if we consider that there are three factors which will, no doubt, account for all the difficulties in destroying inflamed pulps. If the pulp is already suppurating, there will be a layer of dead pus-cells between the pulp and the poison; in many cases the pulp may have retracted, so that the poison does not come into direct contact with it, or calcification may have occurred at the exposed point; so that, although the pulp bleeds, the poison comes only in contact with a very small portion of the soft tissue. Passing by the treatment of dead pulp, we come to root-fillings, and here I

cannot find much that is theoretical, except the prevalent belief in antiseptic dressings.

"There seems to be a certain amount of theory in this method of procedure, when one considers the exceedingly minute apical foramen of a root, and expects to apply a medicament to the tissues above by means of that very fine canal.

"The many different methods of filling root-canals, which cross one's mind when only giving a casual thought to this branch of dentistry, probably serve only to indicate the difficulties which have to be overcome in the actual operation. In surgery, the more difficult the operation the greater is the number of methods of procedure.

"Perhaps no one will doubt that the actual amputation of the apex of a root does in many cases cure a chronic fistula which has been unaffected by other methods of treatment. The theoretical explanation of this fact seems open to serious question.

"We are told that the fistula is due to the roughened end of the root denuded of its periosteum acting as a constant irritant.

"One cannot prove that this is not so, but surely dead matter at the apex, or a protruding root-filling, are quite sufficient reason for all chronic fistulae.

"Also, if the roughened denuded cementum keeps up a chronic suppuration, why does the suppuration cease when the soft tissues have to heal up against comparatively rough bare dentine?

"It is far too easy a matter to put forward a hypothesis, or theory, but is quite another matter to stamp it as false after it has once been started.

"A hypothesis about a group of facts is only of value when it coordinates and explains all the facts, and the hypothesis becomes a theory when it is found that newly discovered facts fit in with the old explanations.

"I am sure, if all the statements in dentistry which contain anything like theory or hypothesis were closely analyzed, many of them would be found to be based on very weak or entirely false grounds."

THE
American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription \$2.00 per year; \$1.00 for six months—including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited. The editor is not responsible for the opinions of contributors. Advertising rates sent on request.

Atlanta, August 4, 1898.

**The Need of Dental Instruction
in Medical Schools.**

Writing on the above subject, Dr. Edward Branigan, in June *Register*, has this to say:

"A more intimate knowledge of the mouth and teeth would help other specialists, aurists, for instance. Severe and painful inflammations of the ear, caused by the teeth, are common. The removing of fillings from pulpless teeth has made many sufferers from improper aural treatment happy. Unerupted wisdom and occasionally unerupted supernumerary teeth are the cause of many obscure ear troubles. Next to the dentist, no one needs dental knowledge more than the aurist. Oculists are now tracing a variety of diseases of the eye back to the teeth, but they have not yet found out all the mean things a diseased tooth can do. Many sufferers from irritation of the eye, backed up by an inflamed tooth, do not

get to the oculist, and if the general practitioner knew more about the teeth as a cause of disease, he would not in so many of these cases prescribe an eye-wash, or glasses, or a tonic; he would send the patient to a dentist.

"A tumor of the nose may be caused by a dead tooth-pulp. Treatment of the tumor without a knowledge of the cause is not calculated to make the owner of the nose happy. The victims of so-called neuralgia, who after weeks and months and even years of anti-neuralgia drugging, die or find relief at the hands of some one who knows something about teeth, are countless. Thousands of people are to-day being drugged for neuralgia who are really suffering from some form of dental irritation. A pulp-stone no larger than a pin-head can bring about so much pain and loss of sleep, appetite and health that nervous prostration may be, and often is, the end of an affair that a pair of forceps would have ended in a moment.

"Bicycle riding has given relief to many sufferers from dyspepsia, but many more dyspeptics would get better if their medical advisers insisted upon their having all their lame and tender teeth cared for. Among the hundred or two of mouths opened every morning for my inspection, I never fail to find a number showing evidence of being used on one side only, and in many of the mouths the front teeth are the only ones that do any work.

"Physicians should also take into consideration the constant presence of pus in the mouths of many of their patients. They do not all do this. I find pus in physician's mouths about as often as I find it in the mouths of other classes of patients.

"The authorities in charge of the management of hospitals should know more of dentistry. If they did, the nurses and other hospital attendants would know how to cleanse a patient's mouth, and the hospital surgeon would know how to look into a patient's mouth intelligently. The removal of half or a whole jaw for necrosis, would

not take place when the extraction of a few roots and the use of an antiseptic mouth-wash would effect a cure. When hospital surgeons know more about the mouth and jaws we shall not be obliged to meet people who have been dismissed from hospitals after some weeks of treatment for broken jaw, with the fracture ununited, or with the union in so erratic a form that the sufferer cannot close his jaws."

In presenting the above it is not our purpose to find fault with our brethren of the medical fraternity for what seems at first to be a dereliction of trust, but a hope that articles like this will tend to bring the attention of medical men more closely to the relation diseased dental organs sustain to other pathological conditions, prompts this review, as no doubt was the incentive to the article above quoted. On one occasion a patient called who had been treated with whatever remedies were known to the physician for facial neuralgia. Among other things, frequent injections of morphia had been hypodermically administered, but all failed, because they did not reach the cause of the trouble. The physician overlooked the important part dental organs almost always play in affections of this kind. The patient, after much treatment, was referred to the writer, when one touch with an excavator discharged the pus contained within the pulp chamber of a lower bicuspid, and all neuralgic symptoms immediately disappeared.

In another case a patient being treated for supraorbital neuralgia, called by advice of the physician, to have an upper molar extracted; as the tooth was badly affected with caries, this was done and the patient lost sight of.

The symptoms were intense pain in supra-orbital region, with swelling of the same parts, together with distension of the eyeballs. It was afterwards learned that the patient had gone to a neighboring city, where he died in a hospital. The writer cannot

say what developments were afterwards made in the symptoms, or what line of treatment was pursued, but after learning of the sad termination of the case, a careful review has led to the conclusion that abscess of the antrum of Highmore was the trouble, and that the supraorbital symptoms were produced by the floor of the orbit being forced upward by the conditions beneath, thus extending the lesion to all adjacent parts. While these citations do not argue that the physician must be prepared to perform those operations which are distinctly within the province of the dentist, nor that the dentist shall assume the sphere of the physician, they do show that there is a common ground where an intelligent procedure demands that each specialty should possess sufficient knowledge of pathology to arrive as nearly as possible at a correct diagnosis, and to determine whether the seat of disturbance is local or constitutional, or whether by reflex action it is made to manifest itself in a remote locality.

Speaking of fractured maxillæ.

While nearly all of these cases go to the physician, there is nothing more obvious to the student of this part of the human anatomy, than that the physician is utterly unable in most cases to readjust the fragments to their former position and retain them there until they are reunited. It ought, therefore, to be a part of medical education to teach physicians the importance of consulting dentists in cases of this sort: no doubt in ninety per cent. of them the results would be far better. The practice of dentistry comprehends the treatment of lesions of the human teeth and jaws, and of the oral cavity, and the equipment of the dentist consists in the instruction he has had in those correlative branches of science which would specially enable him to perform these functions. That the world will eventually recognize this, there is little doubt, and the beneficiaries will be the people.

D. D. ATKINSON.

[The case of supra-orbital trouble cited

by our associate, was evidently due to frontal sinus trouble, which may have through the *infundibulum*, affected the maxillary sinus also.—Catching.]

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If eighteen will meet at some one point and go to Omaha, a through sleeper can be had. Mr. Latimer will take pleasure in answering questions.

DANVILLE, VA., July 30, 1898.

Editor American Dental Weekly:

I have read the article in *Cosmos* on aluminum crowns and mending one with amalgam, also your comments in *WEEKLY*. There is a rapid chemical combination of mercury and aluminum which produces heat. Any one may try the experiment by rubbing together aluminum filings and mercury in the palm of the hand; considerable heat is quickly generated. Some chemists can doubtless give a clear explanation of this.

Yours truly,

E. P. BEADLES.

The president of the Missouri Dental Society says there are over one thousand dentists in that State and only one hundred and fifty are members of the society. The same proportion will hold good in each State. What is the reason for this? These non-members are not all mossback, nor quacks. Fifty per cent. of them are reputable dentists. It is time State societies were putting forth some effort to bring into their ranks the good men of their respective States.

President Rosser, of the Georgia Society, has appointed the following gentlemen as delegates to the National Dental Association, which meets in Omaha the last of this month: J. A. Chapple, Atlanta; D. D. Atkinson, Brunswick; E. L. Hayne, Griffin; Frank Holland, Atlanta; B. F. Sims, Cedartown; H. D. Wilson, Bainbridge; T. P. Hinman, Atlanta. This is a good selection and we hope every one of them will attend the meeting.

Facts Worth Remembering about Hand-Pieces.

The mechanism of hand-pieces and right angles is frequently rendered useless from excessive pressure arising from a desire to hasten the cutting operation and forcing the tools beyond their capacity. Many dentists hold on to their hand burs until the edges of the leaves are entirely worn off, and then press on the hand-pieces or right angles so as to force the cutting, or even with new sharp instruments they use double or triple the requisite pressure and thus damage things generally. The necessarily delicate mechanism of the hand-pieces and right angles will not successfully stand such treatment. The gearing of right angles, although made as strong and heavy as the space will permit, is nevertheless quite a weak affair, and should be used carefully and cautiously.—*Western Dental Journal*.

Refining Gold Scraps.

Dissolve the gold scraps in as small quantity of nitro-muriatic as possible—warming hastens the solution—dilute the gold solution with three times its volume of water, nearly neutralize the acidity by adding small quantities of sodium carbonate. If the acidity is completely neutralized, the gold will be precipitated; in that case redissolve by adding a few drops more of nitro-muriatic acid. Filter the solution, carefully washing it through with water, then add slowly, while stirring, a concentrated solution of ferrous sulphate, previously acidulated with small quantity of sulphuric acid. Set the solution aside for twenty-four hours for the complete precipitation of the gold, then decant the superabundant liquor through filter paper so as to catch any floating particles of gold; wash the precipitate out of the vessel, pouring it through the filter paper; roll the paper up and fuse with flux.

Atlanta, Ga. F. P. CATCHING.

"Electric Sunstroke."

Lavrand (Journal des sciences médicales de Lille, May 21st; Presse médicale, June 29th) relates the case of an engineer who remained exposed for an hour, at a distance of about three feet, to the rays given out by two connected arcs under a current of fifteen ampères. His situation is described as being in that part of the cone of rays where the light was least, but the chemical activity the greatest. Three hours afterward he felt a tingling in his eyes and soon presented all the symptoms of sunstroke, lachrymation, redness of the skin of the face and of the conjunctivæ, and then very severe supraorbital neuralgia. These symptoms disappeared after the application of compresses wet with a boric-acid solution, leaving only a little roughness of the skin. They are attributed to the chemical rays, and not to the intensity of the heat.

Waxing Cases.

In "waxing up" be sure to oil the surface of wax before using blow-pipe or Bunsen flame to give a final finish to the base plate. The oil seems to increase the flowing quality of the heated wax and gives to it a smooth and evenly polished surface. Wax-begrimed teeth, after the "waxing up" process, may be cleaned by rubbing them with a cloth dipped in chloroform.

Reflected Light for the Operating Chair.

Fasten a white shade on spring roller in the usual manner to the top of the window. To reflect the light down on the chair, draw the shade out horizontally by means of a cord passing through a pulley suspended from the ceiling or to the wall at the rear of the chair.

To Give Fine Finish to Gold.

After the scratches have been removed with pumice stone, nothing is so effectual as oxide of zinc on a brush wheel. It leaves a beautiful, lustrous polish, and does not soil the hands.

H. H. JOHNSON.

Editor American Dental Weekly:

I think a good many of your readers would have been glad had Dr. W. R. Christian described his "nearly as quick" method of repairing vulcanite plates. Don't you?

New Orleans.

Truly yours,

K.

Philosophical.

"For every evil under the sun,
There is a remedy or there is none,
If there be one try to find it,
If there be none never mind it."

Ethylate of sodium, says D. V. Beacock, of Brockville, Ont., is good to use on hypertrophied gums, free from pain and danger, even if used in excess.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., AUGUST 11, 1898.

NO. 48.

SILVER NITRATE IN THE TREATMENT OF PULP- LESS TEETH.

For some months past the writer has been experimenting with this drug in the treatment of pulpless teeth, and the results have been so satisfactory that he feels it his duty to lay the matter before the profession. It may be that others are using this means of sterilizing pulp chambers and canals, but so far he has heard nothing of the practice. He writes this believing it to be the best method for the molar teeth that he has used, and he has tried almost all the remedies that have been suggested for this purpose. It can not be denied that good results may be obtained with many other agents, but it is doubtful if absolute disinfection and sterilization of the dentin can be so quickly obtained with any other drug as with the silver nitrate. Its solubility makes it more penetrating than anything else that has been exploited in this practice; but this quality, and its blackening effects upon the teeth, will almost limit its employment to the molars. True it may be used in the treatment of lower bicusps, and in many places where discoloration has already occurred as a result of chemical changes in pulp tissue, and where it is not deemed especially objectionable its application may be extended to other teeth. Now a word as to the method of applying it: Having cleansed the pulp-canals of septic matter as thoroughly as possible, and removed as much of the softened and septic dentin from the wall of the pulp-canals as can be taken

away with impunity, and having allayed all periodontal inflammation to the point of toleration of slight percussion, we put on the rubber dam, and after washing out all other medicaments, we apply the silver nitrate as follows: Having obtained from the druggist a short, wide-mouthed bottle of blue or green glass, containing the finely pulverized crystals, we take a smooth platinoid probe (a gold probe would probably be better, but good results may be had with steel or platinoid), and, wrapping a fiber of cotton loosely around the point of the probe, it is first dipped into water, then into powdered nitrate, and carried as far into the canal as it will go. The probe may then be withdrawn, leaving the cotton fiber with its charge of silver nitrate behind.

The probe is now used as a plugger, and the cotton pushed as far into the canal as it will go. This process is repeated until the canals are packed as full as they can be, then a pledget of cotton is moistened and rolled in the powdered nitrate and pushed into the pulp-chamber. The cavity of entrance may now be closed with some temporary stopping, and the case dismissed for a week or two.

Upon the return of the patient, the whole may be removed and the roots filled. Such is the solubility and penetrating power of this agent that we believe it will filter through the dentin and render aseptic any portions of the roots traversed by canals so tortuous or flattened as to elude cleansing instruments of operator. Our faith goes farther. We believe that the cotton (if raw cotton) might be left in the canals with such

a charge of silver nitrate, and the permanent filling introduced over it, with as good result as can be obtained by other methods of root-filling. We are not yet prepared to adopt this as a practice, nor to recommend it to others, but we have been trying it in some cases where it has been impossible to obtain that degree of dryness necessary to make a good root-filling of gutta-percha or oxychlorid of zinc, and so far the results have been very gratifying. In many of the buccal roots of the superior molars, where nothing but a mere fiber of cotton can be placed, we would say saturate this fiber with silver nitrate and leave it, using oxychlorid of zinc, or some more solid filling-material for permanent filling of the palatine canal. Perhaps the most gratifying results that we have yet obtained have been in the treatment of pulpless deciduous teeth. Our method of procedure has been as follows: After opening the pulp-chamber and allaying the soreness by the use of dressings of old wood creosote, we fill the pulp-chamber about half full of cotton, moistened and rolled in pulverized silver nitrate. A temporary stopping is placed over this, and it is left for ten days. Upon the return of the patient the dressing is removed, the carious dentin is excavated from the crown of the tooth, and, after syringing out carefully with pasteurine, and bathing it with creosote, the whole cavity is filled with copper amalgam, without any effort at cleansing and filling the pulp-canals. We have not had to tap a single case to relieve alveolar abscess where the above treatment has been used; however, it is a comparatively new practice, and we admit that a few short months is insufficient to establish it. The roots of these deciduous molars being usually greatly wasted by the process of resorption, and the canals always difficult to broach, no one has had much success in cleansing and filling them; therefore we believe all will hail with delight a method that gives success without these

baffling efforts. That eminent writer, Dr. Safford G. Perry, has recommended merely cleansing and disinfecting the pulp-chambers; then, if trouble arises after filling, tapping the roots to give exit to gas.

Who has not felt that the boring of a tap-hole was a clumsy way to relieve a very regrettable septic condition? Our silver nitrate cases (and we have thus treated quite a number) have so far exhibited no symptoms of septic trouble. Not the least recommendation for the above practice is the ease and speed with which it may be executed. For the copper amalgam filling, we will say that its greatest value is for the deciduous teeth, and in these cases it is specially indicated.—*Dr. L. G. Noel, in Dental Headlight.*

NEW YORK CORRESPONDENCE.

BOROUGH OF MANHATTAN,
NEW YORK, August 3, 1898.

American Dental Weekly:

Asbury Park, on the Atlantic coast, is the same old spot, less such charm as Atlantic City possesses (grand beach front), for Asbury Park has been sadly devastated during the past few years. The ocean has encroached on the ever famous boardwalk sufficiently to have undermined it in some places and left little room anywhere for the crowds to congregate on the sands as in the past; so the dental crowd who attended this year's annual event of the New Jersey State Dental Society, finding little attraction outside of the auditorium, where the meetings were held, attended more strictly to the proceedings, which was vastly more satisfactory to the essayists and to the entertainment committee.

The auditorium's acoustic accommodations are not fitted for such a meeting. It is an immense covered platform (150 by 200 feet) on stilts 15 feet from the ground. Underneath, it is practically uninclosed. All sides

of the platform are made up of windows as close together as it was possible to place them, all of which had to be kept open for comfort. The light breezes which scurried through the room almost invariably carried the speakers' voices with it, so that listening became a task, as one was obliged to be under tension, watching the speaker too, until the double strain caused exhaustion, then uneasiness followed, and then followed a dozen or two decampings as soon as a paper was closed.

The attendance was about as is general at these meetings; between one and two hundred, notably many women this year, wives, sisters, or friends of the dentists. There were many of the "advanced" contingent present, namely, Dr. Flagg, who had something to say many times and as much as he desired. The president was lenient, possibly because the doctor has determined to go into retirement this winter, for which all will be heartily sorry, for his is a good, honest soul. Most were glad to hear him even so frequently, for his full tones awakened us, and "Flagg's own" wit kept the boys on the *qui vive* all through his discoursings.

Dr. Bogue, of New York, was among the visitors, as was Drs. J. Morgan Howe, L. Ashley Faught and W. G. Chase, of Philadelphia; Finney, of Baltimore; Sweeney, of Washington; Hull, of Jamaica, N. Y.; J. Adams Bishop, of New York; and many others of note.

A goodly number of our New York men were conspicuous by their absence, and it was commented on, too. There is no genuine excuse for the comments, for this was a Jersey event, except that the New York men in years gone by were in the habit of contributing in some way extensively to these occasions, but latterly they have fallen away from that grace. The same old story of familiarity!

The morning of Wednesday, July 20th, the twenty-eighth session of the Jersey State Society opened with benediction. The President's (Dr. J. L. Carter) address was short,

and contained but few recommendations. There was not much to elicit discussion, so adjournment followed to convene again in the afternoon.

The first paper to be presented was short and to the point, and reflected credit on Dr. Allison W. Lawshe, a very young man from Trenton. The title of the paper was, "A New Sectional Block Tooth." In keeping with his paper was the mechanical dexterity displayed in the manipulation of the gum of a regular sectional block—from which he had ground the tooth, adjusting instead a central, lateral and cuspid of the counter-sunk pattern to the gum festoons, holding all together with oxyphosphate. The effect produced in gum section with this kind of tooth was very pleasing, and those who spoke, voiced the sentiment of many others when they remarked that they hoped the manufacturers could be prevailed upon to put out block teeth somewhat similar. The S. S. White Dental Manufacturing Company were the original, if not the only manufacturers of this style of tooth, which presents perfectly shaped labio-lingual and bucco-palatal surfaces, but in plain sets only. Dr. Register, of Philadelphia, claims that he presented to the S. S. W. people the first models from which this kind of tooth was made. Other speakers said that the cheap products of tooth forms on the market were reprehensible, and were more accountable for the unsightly, deformed mouths we see, than poor workmanship was. Which is more than true. A demand should be made of the manufacturers, through dental organizations, for more artistic dental substitutes, constructed on better and different lines, instead of with the division between the central incisors, allowing the joint to be made between the laterals and cuspids, or even supply us with the two incisors in one section for full upper denture construction any way.

W. J. Wallace, M.D., of Glens Falls, N. Y., sent his paper on "Practical Experience, with a Few Homeopathic Remedies

in Dental Practice," to the Society. The doctor believes that the dental parietes and teeth are as amenable to homeopathic remedies as any other tissues of the body. Neuralgias and pericemental disturbances are especially influenced by the mild potencies. This paper provoked much discussion as to the propriety, the right even, or the ability of dentists to prescribe internal medication. Of course those who have had well founded views on these subjects were expected to "flop." The "propriety" for the dentists to use the most dangerous of drugs—anaesthetics—was not refuted.

A paper bearing the title of "An Effective Method of Treating Chronic Alveolar Abscess and Molars Having Exposed Pulp Difficult to Extirpate," was read by Dr. Frank G. Gregory, of Newark, N. J.

His practice has been to extract such teeth, drill out the canal from either end, and after filling thoroughly, replace in its socket.

Teeth that the doctor has not been able to save by any other method have been made to do good service again. Dr. Osmuns remarked in discussion, that he believed we should not interfere with nature, that when we did, there would always be the reckoning day.

I. P. Wilson, D.D.S., of Burlington, Iowa, wrote "A Study of the Physiological and Pathological Conditions of the Apical Portion of the Cementum," which was read by Dr. Faught, of Philadelphia. It dealt mainly with the conditions as they present after induced devitalization by means of arsenic or otherwise. He advises not to apply arsenic to a pulp the second time, for by so doing, one invites disease of the apical cementum. Such cases can never be made comfortable subsequently, no matter how thoroughly filled.

Dr. Flagg said that arsenic was not good for rats, because they did not use it right.

He places arsenic in teeth, and then advises patient to come to him when the tooth

gives them any trouble. *Never* apply arsenic twice in a lower tooth. Rarely a second time in an upper.

Chemical tests do not show the presence of arsenic in a pulp that has been devitalized.

Dr. J. A. Waas, a New Jersey man, thinks there is nothing to compare with "Nerve Mummification," and is very enthusiastic after an experience of less than three years. Only exposed pulps are treated. None which are suppurative.

Dr. Bogue said that he felt sure the process was similar to the obsolete plan of pulp mummification that used to be practiced with arsenic, and felt sure that Dr. Waas would find it so.

When the discussion was about at an end, Dr. LeRoy said that too many always lose sight of the fact that there is an apical end to a pulp-canal, through which serumal fluids will enter, and unless that be sealed, in his opinion, success can never be obtained.

W. G. Chase, D.D.S., of Philadelphia, read a paper entitled "Alveolar Abscess and Caries of the Maxilla," which recommended the establishing of an artificial fistula in chronic cases, and then sealing up pulp-canal thoroughly, following with systemic administrations of quinine and such other remedies that may be necessary when caries of the maxilla are present. The diseased bone must be removed mechanically. Follow with 10 per cent. solution of sulphuric acid, which will dissolve away the dead bone.

Iodine was used locally subsequently. All of which was considered as regular practice by those who discussed the paper.

The several uses of general medicine, which the doctor referred to in his paper, again caused a stir, as did the paper entitled "A Plea for the More Scientific and Careful Study of Materia Medica as a Branch of Dental Education," by Henry H. Merrill, Ph.D., M.D., of Chicago.

Another contribution on "The Evolution

of *Dental Materia Medica*" was by Wm. H. Trueman, D.D.S., of Philadelphia, Pa., which was historical in its entirety. The doctor had several of the very ancient publications with him, which he selected from his extensive library, and which is understood to be one of the most valuable in this country. It was very evident from the history set forth, that *materia medica* has made very little progress in the last few centuries.

The report on "Dental Prophylaxis," by Dr. Watkins, was one of the most interesting papers, as it dealt with a subject upon which few are perfectly informed. The paper contained instructions as to proper food, proper mastication, correct cleansing of the teeth afterwards, how to use picks, silk and brush properly, the latter the "Watkins," which the doctor presented to the profession. It resembles the "Prophylactic" so closely as to be mistaken for same by (as some one remarked) even the manufacturers.

Powders, pastes and other incidentals also were considered.

Other contributors of papers to this occasion were:

Geo. W. Schwartz, M.D., D.D.S., of Chicago, "Details of an Amalgam Filling," exhibiting a regulating appliance for regaining the interproximate space.

Those whose subjects were not announced until read:

E. J. Perry, D.D.S., of Chicago.

F. F. Fletcher, D.D.S., of St. Louis.

J. Morgan Howe, M.D., D.D.S., of New York, and Elgin McWhinney, D.D.S., of Chicago, "The Microbe and Cell Life."

During the morning of Friday, the business of the Jersey State Society was pushed to a finish, and some papers could not be given the time necessary for proper presentation, so were read by title at the adjournment session, at which time the election and installation of the new board of officers took place.

A general clinic was held on Thursday

afternoon in the Auditorium, which was interesting. The good attendance showed that that feature of the program was the drawing card, for many of even the members of the State Society, and of the visitors made their first appearance at the meeting while the clinics were in progress. Your correspondent would like to give you the details of this very important feature of any dental society gathering, but circumstances will not permit giving you more than a synopsis in this letter. Believe me, yours fraternally,
METROPOLITAN.

THE IDEAL LOWER DENTURE IN DIFFICULT CASES.

In the work of plate-making there are certain broad principles to be observed in all cases. First, the plate must rest with even pressure upon the mucous membrane it covers, and if such surfaces present areas of soft and hard resistance, then the plate in relation to those tissues must exert a compensating pressure. The soft tissue must give until an even plane of resistance is established, without which the plate will not adhere, will rock, and will unduly press and irritate at points. I will not describe here the various methods of securing success in this cardinal principle, but merely mention it.

The second important feature is that of properly placing the teeth to secure natural and anatomical articulation. These two broad principles observed, as well as many other minor and less difficult problems solved, we may expect the best results in a large majority of cases.

To this statement there are exceptions, and it is to one of these classes of difficult cases I now direct your attention—the edentulous lower jaw, where the once prominent ridge has been resorbed through disease, through natural senile recession, through absence of plates, or by the wearing of ill-fitting or non-aseptic plates. Here we are

confronted with a situation in which, although we observe all basal principles in plate-construction and every minor point usually taught, we find the denture so unstable and easily movable that it is anything but a pride to the operator or a comfort to the wearer.

A variety of contrivances to obviate this difficulty, spiral springs, and a variety of suction chambers and channels, patented and unpatented, have been devised to meet the demand and delude the hopeful, as they certainly have the writer in past years. The springs, in my opinion, are hardly worth considering; they are ineffective and also intolerable because of the continual pressure and difficulty in cleansing. The numerous little suction points or deeper channels are sure to produce irritation at last, accompanied by greater absorption. On account of such irritation they are usually inapplicable because of the surface on which the plate must rest being so narrow, on account of the encroachment of muscular tissue, that they cannot be placed.

A solution of the difficulty in these cases is to supply, as well as a perfectly-fitting plate, a heavy one, and the object of this paper is to recommend to you the very heaviest material made for that purpose, namely, Watts's "Metal." The use of heavy plates to utilize the force of gravity in the retention of lower dentures is nothing new, but in practice—save by employing weighted rubber—it is very little used. In conversation with the managers of dental depots I find that a fusible alloy is used in probably less than one per cent. of cases where my experience proves it to be indicated.

The chief objection which is urged against the use of this material is that the muscles of the lower jaw soon tire of the superimposed weight. This, however, has not been my experience. To settle the question for myself, I found in a patient an opportunity to test this matter, and proceeded to experiment, with the result that in no case did I

find the weight an objection, if the plate did not weigh over fifty dwt. The ordinary plate made of Watts's metal weighs about thirty-four dwt.; the same of Weston's metal weighs twenty-six dwt.; of weighted rubber, twenty dwt., and of ordinary rubber, ten dwt. I found that the additional weight of Watts's metal gave a decided advantage in the retention of the plate, and the experiments all went to show that a plate weighing between thirty-five and forty dwt. never tires the jaw, and affords a comfort and satisfaction not attained by materials of less weight in difficult cases.

Another objection to the fusible plate is that the metal will not retain its color and will produce a disagreeable taste. These features I have found in fusible alloy made by the dentist himself, but have not observed them in Watts's metal (the formula is not known precisely, but is principally of tin, lead and bismuth, as are all alloys of this class). In the dentures I have made of Watts's metal there has been no oxidation after fifteen years' use, and other dentists have confirmed this.

The most frequent objection is the difficulty in obtaining a good result, the claim being made that the metal will not flow in every point of the mould. I have gone through this experience, but now find no difficulty in securing a perfect cast from the mould. I use for model and investment the usual plaster, sand and asbestos of soldering investment, with the addition of a small amount of whiting to render the surface smooth, following the directions accompanying the metal, with the addition of pure beeswax as a flux. Before I used the beeswax as a flux failures were common, and I therefore give you this plan, which has not been before recommended, and am confident that it will insure good results. The flux must not be used indiscriminately or unevenly, but as follows: After carefully removing every particle of base-plate, heat the case and apply pure melted beeswax

with a hot pencil-brush wherever there is doubt of the alloy following. Just a smear of the wax will do the work: too much of a coating will result in failure.

When this is done and the case is clamped, joints luted, heated and dried until moisture will not condense on a mirror held before the pouring-gates, the case is ready for pouring: Do not pour while the flask is very hot, but allow it to partially cool; do not overheat the metal, but pour rapidly just so soon as thoroughly melted.

I shall be pleased to give any practical instruction to those who have had difficulty in doing this work, and I can cordially recommend this style of denture, because it is strong, stays in place, does not tarnish, is easily constructed, and reasonable in cost.

I quite agree that reinforced gold plates, with rubber attachment, will give the necessary weight, and a more acceptable and handsomer result is obtained; but the great majority of patients wearing full lower dentures are unable to pay the fees necessary for gold.—*J. D. Patterson, D.D.S., Kansas City, Mo., in Dental Digest.*

Gutta-Percha in a Cavity.

I wish to give a word of warning regarding the use of any large quantity of gutta-percha in a tooth. In THE AMERICAN DENTAL WEEKLY of August 4, 1898, occurs the following, which if pursued may lead to trouble. The writer, Dr. B. F. Arrington, says: "In deep cavities, with near approach to pulp, mop walls with creosote and cinnamon, and base with nitrate of silver, as above mentioned, then adjust over the base a piece of sheet lead (thickness to suit) and introduce gutta-percha, packing and condensing carefully, until cavity is half or two-thirds full, then finish with gold or amalgam as preferred."

Gutta-percha will expand sufficiently to fracture a tooth or displace a filling. Cement in place of the gutta-percha is much better.

JOHN G. HARPER.

St. Louis, Mo.

"Dots" on 2d Tri-union Meeting of the Maryland, Virginia, and Washington City Dental Associations, held at Baltimore, June 2, 3, 4, 1898.

Of the many dental gatherings which have been held in Baltimore in times past, our last meeting—the 2d Tri-union—was the largest, most enthusiastic and successful of any. Over four hundred dentists from afar and near, with a sprinkling of city physicians, were in attendance. From the beginning to the end a spirit of good fellowship prevailed. Many excellent papers were read and debated, among the principal being the following: "Dental Laws and What Have They Accomplished," "Patents and Patent Abuses," "The Status of the Degree of D.D.S., under the Law," "Sterilization of Instruments," "The Chemico-Micro-organisms of the Stomach in Relation to the Diseases of the Oral Cavity," "Drug Habits among Professional People," "Irregularities of the Dental Arch," "Esthetics in Prosthetic Dentistry," "The Treatment and Care of the Deciduous Teeth" and "What are the Best Filling Materials for Children's Teeth?"

Dr. A. W. Sweeney claimed that laws made to regulate and elevate the practice of dentistry have not in the majority of cases either regulated or elevated the dental profession.

Dr. J. N. Crouse claimed that ninety per cent. of all the dental patents have been, upon examination, proven to be frauds upon the dental profession, and it was high time we—the dentists—were taking some steps by appealing to Congress to prevent the impositions.

Dr. W. G. Chase claimed, that we, dentists with the title of D.D.S., have the right and authority to administer anesthetics, drugs, or remedies for the alleviation of such diseases as come under our care, notwithstanding that medical laws say one

must have the degree of M. D. before he can prescribe medicines.

Dr. H. O. Reik claimed, that of all the well-known disinfectants used in sterilizing either medical or dental instruments, there is nothing better than formaldehyde vapors. His conclusions were, that we have in this agent, when the gas is generated in an airtight box, "a rapid, cheap, easy and sure method of sterilizing instruments without in any way injuring them."

Dr. H. S. Harvey claimed, that "the chemico-micro-organisms of the stomach, when produced by diseased condition of that organ, are the prime factors in the causation of an acid condition of the mouth, without which there would be but little decay, as the decalcification of the lime salts of teeth is rarely caused by any acid which may be produced directly in the mouth.

Dr. W. Xavier Sudduth claimed that the use of the *so-called* nerve tonic, containing alcohol, cocain and other narcotic drugs, in unknown quantities, in a large number of cases is the beginning of the foundation to create drug habitues.

Dr. Eugene S. Talbot claimed that irregularities of the dental arch and maxillæ were never in any case caused by finger or thumb sucking, or mouth-breathing.

In the care and treatment of the deciduous teeth, and what are the best filling materials for children's anterior teeth, some of the essayists claimed that amalgam was the best, others oxyphosphate and oxychlorid were the best, others that pink or white gutta-percha was the best, others advocated for decayed deciduous teeth no filling at all, only using nitrate of silver to swab out the cavities. Out of ten or twelve papers, gold was in no case advocated. During one of the debates Dr. B. J. Cigrand contended that arsenic in cement was the cause of the death of many pulps. Dr. Wm. A. Mills contended that the same could be said of amalgam, if the

metals which entered into their composition were not chemically pure.

Dr. E. E. Cruzen claimed, that too little attention is paid to the art of imitating nature in prosthetic dentistry, as to color and arrangement of artificial teeth. He claimed also, that too much gold was being conspicuously used, making one, when smiling or laughing, look both hideous and vulgar. The nearest approach to nature is the acme of all work on this line.

Baltimore, Md.

WM. A. MILLS.

Painlessly Destroying Pulps without the Use of Arsenic.

The method is exceedingly simple and very effective. It is not original, at least, as I now practise it. Formerly I used the method to do away with the pain which still remained in the small particles of the pulp which were left in the roots, the greater part of the pulp having been devitalized by arsenic. However, as a method has been lately discovered to devitalize the pulp as easily as I did the remaining particles, I resolved to try my method on the pulp, and it worked like a charm. Here it is: Dry the cavity out after having removed as much of the debris as practicable without giving a great deal of pain; then take a piece of *soft* spunk, dip it in alcohol (absolute alcohol is the best) and then dip the alcohol laden spunk in crystals of muriate of cocaine, place it in the bottom of the cavity and press a piece of unvulcanized rubber against it quite hard for from one to three minutes, then take out and remove the remaining layers of decay till you thoroughly expose the pulp, and repeat the operation, when you will find the pulp has lost all sense of feeling and you can remove it without the slightest pain.

Be careful to remove all the pulp before filling, as sensitiveness does not return for from ten to fifteen minutes.—A. J. McDonagh, L.D.S., in *Dominion Dental Journal*.

THE
American Dental Weekly

ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription \$2.00 per year; \$1.00 for six months—including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited. The editor is not responsible for the opinions of contributors. Advertising rates sent on request.

Atlanta, August 11, 1898.

Enforcing the State Law.

In this issue we publish a letter from Dr. Thornton, of Calhoun, Ga., as a fair sample of many that we receive, calling attention to illegal practitioners. The picture that he draws is a common one in this State. It seems that never before, certainly not since this writer's connection with the board of examiners, has there been so much complaint about illegal practitioners, coming from all sections of the State. Undergraduates seem to think that if they can, on the sly (and some are not very sly about it either) make a few dollars by violating the law, and whacking into a legal practitioner's territory, it's all right. There is always a difficulty in apprehending such violators. It cannot be done without the aid of the legal practitioner in whose territory such violations occur.

The Board of Examiners is not, *per se*, a prosecuting body, but it stands ready and

willing all the time to lend its aid in any case of prosecution.

It is the duty of the legal practitioners in whose territory the illegal practice is done to get up the evidence, so as to have it ready for the grand jury. It is no more the right of a member of the Board to prosecute than it is that of any other legal practitioner. Both should, and will, work hand in hand in any case of violation. We know that it is an unpleasant duty for one to get up evidence against a neighbor's son, as the case many times is, but if the law is to be enforced as it should be, and ought to be, this unpleasant duty must be performed.

Any solicitor whose desire is to see that violators of law are arraigned before the courts, will be glad to get evidence criminalizing such parties. Therefore it is the legal duty of those possessing such evidence to furnish it. We hope to see the dental law of the State rigidly enforced, and have confidence enough in the legal officials to believe that they will diligently prosecute all violators. We can promise to any dental practitioner interested in such a case the hearty co-operation of the Board of Dental Examiners.

We have been informed that individuals fresh from the plow-handles and workshops have been taught to extract teeth *painlessly*, using some nostrum, they paying the teacher from \$50 to \$100. These tooth-pullers are abroad in the land, and by all means should be arrested.

Section 15 of the law bearing on the subject is as follows:

"Be it further enacted, That all persons shall be held to be practicing dentistry within the meaning of this Act who shall charge a fee or salary, or other reward be paid either to him or another person, for operations or parts of operations of any kind, in the treatment of teeth or lesions of human teeth or jaws, or *extract* teeth, or in correction of the malpositions thereof;

provided, that nothing in this Act shall apply to regularly licensed physicians in extracting teeth and charging a fee therefor, or performing surgical operations."

This section in the law will also estop the "Indian tooth-puller," who flaunts about over the country extracting teeth, breaking jaw-bones, and selling his nostrums thereby.

Some Errors.

LAGRANGE, GA., Aug. 8, 1898.

Editor American Dental Weekly:

In reading Dr. B. F. Arrington's article on "Preservation of Natural Teeth," I notice a few assertions that I think will bear discussion. I want to say before I begin, however, that I have enjoyed Dr. Arrington's articles very much, and while I may criticize some statements he makes, I have been benefited by the articles and want to thank him for writing them.

One statement that he makes, especially, seems to be such a mistake that I feel that it should by all means be answered, and while I much prefer its being answered by some one more capable, for fear it may be overlooked I will endeavor to do so myself to the best of my ability.

He states that in selecting an amalgam to "be careful to select one in which *tin* largely preponderates."

On the other hand, I believe the best amalgam contains from 60 to 65 per cent. of silver and 35 to 40 per cent. of tin.

In making this assertion I will state that although I have spent a great deal of time and labor on this subject, I do not ask you to take my word alone for it. What I say has been proven by the recorded experiments of Dr. J. Foster Flagg, Dr. G. V. Black, Dr. H. H. Burchard, and many others.

Dr. Arrington states that "excellence in the make-up of an alloy can never be attained short of a decided preponderance

of tin, which as a metal, singly, is the best of all metals for preservation of tooth structure." He does not seem to bear in mind the fact that tin "as a metal singly" is a very different material from tin amalgamated.

Dr. Flagg in his "Plastics and Plastic Filling," page 44, states that "tin permits shrinkage in proportion as it is added in quantity. On the next page he states that "Silver is the first, the most important, the essential metal of a good amalgam alloy for filling teeth."

Dr. Black, to whom the dental profession is so deeply indebted, says, in speaking of his experiments on the expansion and shrinkage of amalgam, that "those in which tin is in excess contract, those in which silver is greatly in excess expand, and the indifferent point is reached at about 60 silver and 40 tin."

Dr. Burchard says that "alloys containing more than 65 per cent. of silver expand, while those containing less than 65 per cent. of silver contract.

Another attribute for a good amalgam is edge strength. It is a well-known fact that in this respect silver is far superior to tin. It is equally well known that the more tin contained in an alloy, the more trouble we will have from spheroiding. These are only a few reasons why silver and *not* tin should be pre-eminently the metal of first importance in an amalgam alloy.

The authorities I have quoted have given absolute proof of their statements, in their writings on the subjects. As for myself I will state that I have labored incessantly upon this subject, because I realize its growing importance and think that it should receive more scientific study and attention. When so many thousand teeth are saved every year by amalgam, it is our duty to study it more and know exactly the alloy we use. Then by use of the proper amount of care in the preparation of the cavity, inserting and polishing the filling, we will find a great improvement in our amalgam work.

FULLER M. LONGLEY.

A Canadian's View of the Southern Branch.

While taking a few weeks' rest it has been convenient for me to be at St. Augustine, Fla., during the meeting of the Southern Branch of the National Dental Association held February 22-24. The attendance, I am told, was not as large as usual, owing to the time of year at which it is held, this being the working season for the profession in the South. It was, however, a convention of strong, brainy, representative men who have the welfare of the profession and interest of the public at heart. Many of them are standard-bearers who are known to us all for what they have said and done. The number of young men present and taking prominent part was very noticeable; many of these are pouring into the science of dentistry their best life-blood. These young men are already talking to us through the professional press. Several of the colleges were represented by one or more professors.

Much time was necessarily consumed by the *re-organization* of the constitution and reorganization, this being the first meeting since the union of the "Southern" and "American," but the business was disposed of in the most businesslike manner and dignified way by the President, Dr. E. P. Beadle, of Danville, Va. The address of the President was a thoughtful presentation of facts and suggestions for the future. It elicited a great deal of well-timed discussion.

There were about twenty papers read, and they were all modern, up-to-date and full of good things, many of them well sustained by models and illustrations. Without making comparison of their relative value, it might be well to mention a few papers and thereby draw the attention of the profession in Canada to these as they may appear in the journals.

Dr. A. L. Fort, of Atlanta, gave a paper entitled "Asepsis," which was illustrated by cultures in agar-agar and bouillon, from operating instruments which had not been

properly cleaned. It was an object-lesson of terrible meaning.

Dr. T. P. Hinman, of Atlanta, lectured on and exhibited the Roentgen rays, showing the use of the instrument in dentistry. (Dr. Hinman is an Ontario boy, who promises to be a credit to the old sod.) He also presented some very beautiful X-ray photographs of his own production.

Dr. Weld, of New York, read a paper, which was illustrated by stereopticon views, on the treatment and filling of small and tortuous nerve canals by a chemico metallic process. It was most interesting and bristled with suggestions.

Dr. H. H. Johnson, Macon, Ga., read a very able paper on Reflex Nervous Action, especially referring to the relation of diseases of the teeth to insanity, and urged the appointment of dental surgeons to government hospitals for the insane.

The clinics performed on patients were interesting and profitable. A number of useful appliances were shown, and several "best" ways to make crowns and bridges. The discussions were well sustained and brought out much food for thought. It is a regret that I did not think of a communication to the *Dominion Dental Journal* until after the close of the meeting, and I here and now apologize to the authors of the papers mentioned if the titles are not given just correctly.

The hospitality of the Southern people is proverbial, but to experience the thrill of it is worth a journey.

For six weeks your correspondent has been almost overcome by the exceeding kindness of this people, but all unexpectedly the crowning evidence came to me when by unanimous vote I was made an honorary member of the Southern Branch. However unworthy may be the recipient of the honor, Canada and Nova Scotia is distinguished by having the first honorary member ever elected to either of these societies.

On Friday, 25th, the dentists of St. Au-

gustine invited the Association to a sail in the beautiful harbor and out to sea, which was most enjoyable to all but a few who suffered slightly from *mal de mer*.

St. Augustine is a wilderness of sub-tropical, almost oriental beauty, a very fairyland of flowers. No wonder, with such a climate and such magnificent hotels, the health-seeker and pleasure-seeker crowd it in the winter months. Yet, O Canada! "with all thy faults (of winter climate) I love thee still."—*Frank Woodbury, D.D.S. Halifax, N. S., in Dominion Dental Journal.*

CALHOUN, GA., August 8, 1898.

Dr. B. H. Catching, Atlanta:

I write you in regard to the Dental Board. I was sick at the time of the meeting and do not know who the new board is.

What are they going to do with the new Dental Law? Are they going to make it operative, or is it to remain a dead letter on the statute books?

The woods are full of men "pulling teeth without pain" and correcting irregularities by pulling the childrens "tushes," and of course doing a great deal of damage. And what about undergraduates? Does the board license them? They are in practice all the same. Even first course students are in regular practice—making a fortune putting in gold fillings for a fraction of a dollar, and the worst feature of it is, three-fourths of the people think we ought to do the same—a proposition which I am wholly unable to comprehend.

Let me hear from you, and oblige,

Yours truly,

R. W. THORNTON.

The young men of the profession are taking the lead in official matters relative to dental societies. This is as it should be. New blood flowing through the society veins will cause new vigor. The older men stand as balance-wheels or governors, to control the pressure.

PASS CHRISTIAN, MISS., Aug. 2, 1898.

Editor Dental Weekly:

Having received official information from the different passenger associations, I beg you to call attention to the fact that all delegates and members attending the meeting of the National Dental Association at Omaha will be given return passage for one-third regular fare, *provided* they pay full fare going, and also *provided* they obtain when purchasing full fare ticket a certificate to that effect of the standard form. Tickets can be purchased three days previous to August 25th (date of the meeting of Executive Committee of the National Association of Dental Faculties). and are good to September 3d. All return certificates must be signed before presentation for purchase of return ticket. Yours truly,

WM. ERNEST WALKER,

Assistant Secretary National Dental Association.

PASS CHRISTIAN, MISS., Aug. 2, 1898.

Editor American Dental Weekly.

DEAR DOCTOR:—Accept my thanks for the space given in your paper to the National Dental Association and the Southern Branch. Please call the attention of your readers to the fact that all permanent members of the National Dental Association are entitled to the privileges of membership *regardless of the delegate feature*. It is evident from letters received that some are under the erroneous impression that the meeting at Omaha is to be one composed exclusively of *delegates*, and that even permanent members can attend only as delegates elected by their State Society. Several of the State societies have thus made the mistake of electing as delegates men who are already members of the Association, thus defeating the principal object of the delegate feature—namely, the *increase of membership*. Yours fraternally,

WM. ERNEST WALKER.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., AUGUST 18, 1898.

NO. 49.

THE EXTRACTION OF TEETH.

DR. GEORGE B. CLEMENTS.
Macon, Miss.

Some two years ago I came to the conclusion that the extraction of teeth, as performed by the dental surgeon, was an unfinished operation if ever there was one from a scientific and surgical point of view. When the general surgeon is called upon to make an amputation, after the removal of the several portion of bone he trims up and smooths off all jagged portions from the fractured end, and then folds his flaps over and stitches them down neatly and smoothly. I claim that after the extraction of teeth the gums should be turned back and the jawbone put in the same condition as is done by the general surgeon in case of an amputated limb; all ragged edges of the alveolus and the septa between the teeth should be trimmed down and a smooth surface left, over which the gums would heal rapidly. It is unscientific to leave the operation in an incomplete, unfinished state, causing the patient to suffer for weeks and weeks as the gums are drawn over those sharp jagged points of broken alveolar process. When you extract a number of teeth you say to the patient: "After three or four months I will put in a permanent set of teeth, but you will have to wait for the gums to heal." And in the meantime, while the gums are "healing," scar tissue is formed, which is drawn tightly and rigidly over the projecting points of process, and often the patient will return, saying that you have broken off a root and

left a projecting point which is cutting through the gum, and is very sore. You say, "Oh, that's all right; that's not a piece of root; let it alone, and in time it will be absorbed;" and you prescribe a mouth wash, and the patient goes home to suffer for weeks and months perhaps with a sore mouth, before the process is entirely absorbed. But I propose, in a few minutes, with a special forceps which I have devised, to trim the alveolus into just the shape I want it to have when ready for the permanent set of teeth. I propose to do in a few minutes what it takes nature, unaided, weeks, and sometimes months, to do.

When you are ready to extract the teeth put fifty drops of aromatic spirits of ammonia in a wine glass of water. This is a reliable, diffusible stimulant. Give it to the patient, and when you see a flush upon the face take out the teeth, then immediately pass the beak of this alveolar amputation forceps right in and clip out the middle septum; pass the flat side in between the periosteum and the bone and clip off all that is necessary to leave a smooth, rounded surface. After the shock of extraction the patient will not mind this minor operation if it is done immediately. In many cases there will be very little to remove, but whether much or little you will want it away from there, and if you do not remove it, you will have to grind them out to fit over projecting places. In a very few days the gums will have healed nicely, and in from two to three weeks, at most you put in a permanent set of teeth, and you can put in block teeth as easily and as nicely as plain teeth.

Patients will readily appreciate the advantage of this process over having to go for months without teeth, waiting for the gums to heal.

Another advantage in this method is that there will not be nearly so much subsequent absorption as when the stage of inflammation is continued weeks and months, for as long as inflammation continues the elements of the alveolar process are being absorbed and carried off. You will find that you will have but little subsequent absorption, and your permanent plate will be permanent. You will find this practice will be of benefit to yourself, to your patients, and I am sure it will be so to the profession. I thank you for your kind attention.—*Dental Headlight*.

DIES AND SWAGING.

Dr. L. P. Bethel gives some valuable suggestions on the above subject in the *Ohio Dental Journal* as follows:

Some recent articles on "Dies and Swaging" lead me to ask if there is a simple method of accomplishing certain ends, why resort to complicated methods? And yet this is just what is being done in much of the instruction in prosthetic dentistry given to the dental practitioner as well as to the dental student.

As for instance in the matter of moulding sand, years of experience have demonstrated beyond all question that oiled sand, as a matter of convenience and time-saving, is preferable to moistening with water, as it can be used many times without reoiling, provided zinc is not used for dies, as that is poured so hot it burns the oil. Then if the dentist is in haste and moistens too much with water, or packs so hard the steam cannot escape, blow-holes are liable to occur in the die. The silly objection made that it soils the hands and creates an odor is hardly worth considering; but the fact is it does not soil the hands more than wet sand and the odor we fail to notice, and if we did it

does not compare with the opening of a vulcanite flask. We have found of late that lard oil is preferable to olive or cotton seed, as it does not burn and lump as the vegetable oils. The Chase Dental Co.'s oiled sand is a great convenience to the busy dentist.

Then as to the process of moulding. If the model is made *flaring* all around, it will find its way out of the mould readily and so mar the mould far less than if it is lifted out. If it does not drop readily do not turn the mould over and tap the model, but simply jar the edge of the flask on the edge of the moulding box. If it drops readily so much the better. The Bailey flasks are totally unfit for the purpose; too small and too flaring. Have a ring made of sheet iron 3 inches deep, 5 inches in diameter, the edges wired. With this there is plenty of room for packing the largest cases. Use the Bailey flask for casting the counter-die.

As to the material for dies one would suppose that 48 years' successful use of Bab-bitt metal, after having used for five years zinc, type-metal, etc., would demonstrate its superiority, for it is the only alloy which has all of the necessary qualities for a dental die. I know and so do the multitude of dentists who use it, that it has greatly simplified the fitting of metal plates to the jaw. If it successfully fits plates for the heavy continuous gum denture, and needing no vacuum cavities, it would seem as though nothing further need be said.

Aluminum does not need annealing; it is better not to. Instead of using the mallet on the palatal surface roll a wad of wet paper and use as a half counter, and so the surface is not marred. It is so soft it does not crack, but is apt to tear over the edge of an undercut; to prevent this pare off the portion of the counter-die which projects into the undercut, then after swaging drive into the undercut with round-faced hammer. After using this paper wad lay a piece of rubber-dam over the palatal surface in

finishing the swaging. I use the shot apparatus occasionally, but deem it unnecessary in most cases, having successfully fitted plates without it for 53 years.

The new platinoid I have used in two cases to my sorrow. It discolors badly and the patients complain of a bad taste. Both cases had to be made over on aluminum.

SHOULD WE DRINK AT OUR MEALS?

In an interesting and somewhat historical article, Dr. C. A. Ewald, of Berlin (*Zeitschrift für Krankenpflege, Medical Record*), discusses this mooted question at some length. He considers soup, because of its small percentage of nourishing material, merely as fluid; he states that, aside from what is directly taken as drink, much fluid reaches the stomach during a meal, through the sauces and from the water percentage (both natural and by cooking) of the meats, vegetables, etc. Most persons feel the necessity of adding more fluid to the meal by drinking either ordinary water, carbonated waters, or alcoholic beverages. The more one eats, generally the more one drinks, and the greatest eaters are the greatest drinkers. If drink be prohibited, the amount eaten is less; indeed, on the above very greatly depends the secret of the "Schweinger cure" for obesity. It is a well-known fact that if the appetite is weak and the mind and nerves are somewhat relaxed, a drink of water will excite the appetite and stimulate both brain and nerves; and this is due directly to the fluid and not to the alcohol contained, for we find these facts the same in abstainers. The more fluid in the way of drink is added to the gastric juice, the greater is the quantity secreted; hence, the greater the tax upon the gastric glands. Under normal circumstances, however, the stomach without detriment accommodates itself to a range of large quantities of fluid. Ewald says that much of the fluid passes into the intestines,

another portion is absorbed; hence, there never is in the normal stomach a stagnation of large quantities of liquid. The widely accepted belief that alcoholic fluids (not taken to the point of toxicity) retard digestion does not seem to be borne out by the recent experiments of Chittenden. Not even whiskey and brandy seem to retard digestion. The proteolytic power of the pancreatic juice is uninfluenced by small quantities of alcohol-containing fluids. The extraction of body warmth through cold drinks the writer considers as very much overrated. He attributes the bad effects of such drinks to irritation of the stomach mucosa, which becomes, therefore, a possible starting point for acute or chronic inflammatory conditions. In the normal stomach, the author concludes, not only drinking at meals, within certain limits, does not interfere with digestion, it even aids this process. With patients suffering from stomach or other diseases, however, the case is different. Drinking *ad libitum* cannot be allowed. To the question, shall patients drink nothing with their meals? Dr. Ewald answers that he sees no reason why small amounts of fluid should not be allowed, excepting to patients suffering from dilation of the stomach. As above shown, fluids, and particularly alcoholic and carbonated fluids, will, even in limited amounts, aid digestion and increase appetite and will more than counter-balance the so-called ill effects of drinking at meals, viz., the possible slowing of digestion, the dilution of the solid constituents of the meal, the overburdening of the stomach, a very improbable lowering of body temperature, etc. Even admitting that such effects occur, the question of drinking before, during, or after meals, Dr. Ewald considers as belonging to the hokus-pocus of suggestion therapy; the physiological act is not influenced if fluid is taken one-half hour sooner or later. The fluid should not be very cold; further, we must follow the indications of the disease and, as far as possible, the wish

of the patient. Naturally, alcoholic fluids that have a direct local irritating effect will be withheld, *e. g.*, in ulcer of the stomach, new inflammatory processes, necrosing neoplasms. Another question is, how far shall we allow abnormally increased thirst to be quenched, as in diabetes, fever, and some chronic diseases? The writer answers that the thirst should be quenched with as little liquid as possible. This is particularly true in case of stomach dilation, when the patients have the tendency to drink large quantities, partly because stomach absorption is very slow and imperfect. Moreover, though this seems paradoxical, thirst may be lessened by forbidding water as a drink. Then, too, thirst very often depends upon dryness of the mouth and pharynx; hence, frequent moistening of the mouth and gargling will often lessen thirst.—*Dietetic and Hygienic Gazette*.

Riggs's Disease Pockets.

American Dental Weekly:

For several weeks I have enjoyed reading articles on sealing pyorrhea pockets, and only once have I noticed my favorite treatment, or only one of the two that I use, mentioned—sulphate of copper; but I wish especially to speak of "muraline," one of the best non-irritant astringents we have. I have been able to stop secondary hemorrhage in ten minutes, after perchloride of iron and plaster of Paris had failed; and for capillary hemorrhage and weeping gums for crown-work it acts instantly. It is good alone in the treatment of pyorrhea alveolaris, and hard to equal, and comes nearer closing those pockets than anything I have ever found; combined with sulphate of copper we have a non-caustic, non-irritant astringent antiseptic, with granulating properties, well worthy of a trial. Results so far from this treatment are perfectly satisfactory to patients and myself; others try and report.

E. A. WILSON, D.D.S.

Birmingham, Ala.

CANADA LETTER.

Editor American Dental Weekly:

Here we are again. Even in Canada it is necessary to get away from the heat of the office and find some cool rural retreat, where the weary dentist may forget for a while the "daily round" and common task. A visit to Canada during the dog-days will convince any skeptic that the title "Our Lady of the Snows" is not so appropriate as "Our Lady of the Sunshine" would be. However, we are favored, as we think no other land can be, with beautiful summer resorts within easy reach of all our cities. A score of our Ontario brethren are to be found in the Muskoka district, while others are doing the famous Mackinac trip or enjoying the beauties of the picturesque Thousand Islands. Dr. C. N. Johnson, of Chicago, is, as usual, holidaying in Ontario, indulging his favorite pastime of driving through the country wherever sweet fancy leads him.

Dr. J. B. Willmott, dean of the faculty of the dental college at Toronto, is going, we understand, to Omaha to attend the National Association.

On July 19th a sad happening took place in the office of Dr. R. J. Langheed, a Toronto dentist. Dr. Moffatt, a prominent young medical man of that city, called on Dr. Langheed for the purpose of having several teeth extracted, as he had been a victim for some time to neuralgia. Chloroform was administered by Dr. Bray, a fellow-practitioner called in by Dr. Moffatt. After two or three teeth had been extracted it was noticed that their patient was in a state of collapse. Every effort was made to revive him, but without avail; one more had been added to the already long list of fatalities from chloroform. The coroner was called, but decided an inquest to be unnecessary.

A few months ago a great many Canadian dentists purchased, at \$25 each, a method by which a living pulp may be removed in from three to five minutes without pain.

Each dentist purchasing gave bond to forfeit a large sum if by any means he allowed the secret to become known to any one not entitled to know and use the same. Notwithstanding the precautions used the secret became known to a member of the Toronto Dental Society, who, believing in giving the greatest publicity to everything calculated to benefit the profession and the public, gave it still wider prominence. For the benefit of your readers who may not have paid for the secret, here it is, as good as if it cost \$25 :

Take a little piece of spunk, dip in alcohol or some other good solvent of cocain, then touch the moistened spunk to cocain crystals, place this in the tooth-cavity, and place over it a piece of soft vulcanite. A broad instrument applied to the vulcanite with a steady, firm pressure will cause the cocain solution to be absorbed by the dentine and pulp. If you have a layer of sensitive dentine over the pulp, remove by means of a sharp burr, and apply a second treatment of the solution to the exposed pulp. After a few minutes of steady pressure the pulp may be removed without pain and the canal or canals filled at once before sensation returns, which will not be for about fifteen minutes. Try it, and you'll bless the discoverer, even if he hid his light under a bushel and retarded the progress of scientific dentistry by keeping the method a secret.

Allow me to say in closing that THE WEEKLY is appreciated more and more on closer acquaintance.

Yours, CANUCK.

For Periostitis.

The following is recommended for periostitis. Iodine crystals are dissolved in absolute alcohol until completely saturated. A mixture is then made of a third of this solution, a third of aconite tincture, and a third of chloroform.

List of Committees for the Joint Meeting of the Southern Branch of the National Dental Association and the Louisiana State Dental Society.

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C. L. ALEXANDER,
Cor. Sec. Southern Branch National Dental Association.

Charlotte, N. C., July 12, 1898.

Georgia Board of Dental Examiners.

The Governor has appointed, from the ten names nominated at the last meeting of the State Society, the following Board of Examiners: E. H. Reid, Putnam county, one year; H. H. Johnson, Bibb county, two years; D. D. Atkinson, Glynn county, three years; J. H. Coyle, Thomas county, four years; Thomas Cole, Coweta county, five years.

This is an excellent board, and under their management the interests of both profession and people will be cared for.

Drs. Coyle, Johnson and Atkinson are of the old board and are members of the State Dental Society. Drs. Reed and Cole, while not members of the Society, are high-toned honorable gentlemen.

Constitution of Southern Branch.

The revised Constitution of the Southern Branch of the National Dental Association has been printed and freely circulated. The President requests a careful study of the same, in order that we may act understandingly. Any member of the profession desiring one will have it promptly furnished him by addressing Wm. Ernest Walker, Pass Christian, Miss., who will also furnish blank National Dental Association delegate certificates to State societies requesting them.

Yours fraternally,

WM. ERNEST WALKER.

A Rare Case.

On the 5th of last May a Mrs. S., who was near the age of fifty and a typical country woman—hale, hearty and strong—was in our city and came to my office for the purpose of having an offending tooth extracted. Her mouth presented, on examination, a rather ragged condition, from the hands of a country doctor. However, there were twenty-four roots and teeth and a thorough case of pyorrhea alveolaris. Each tooth and root was affected all around, and very offensive. I advised extraction, since she lived in the country and could not have them treated, so she had them extracted. Two weeks ago she came in to find out when she could get an artificial denture. There was such a change I did not recognize her. She told me this.

“When I was a girl, about seven years of age, my school-teacher, for some reason, was going to whip me; instead of whipping me he choked me severely. Soon after, a large lump (tumor) came out on my neck. It was just above the sterno-clavical joint and has remained there all these years.” Since extracting her teeth it has completely disappeared. I would like to know what the teeth had to do with it. Are such things common?

E. A. WILSON.

Birmingham, Ala.

The *Scientific American* for July 2 calls attention to the great value of cold tea flavored with a few drops of lemon juice, and cites Sir John Hall, K. C. B., of the Kaffir war of 1852, in which a march of a thousand miles was covered by two hundred men in seventy-one days on cold tea without either wine, spirits, or beer. The experience of Indian officers, and of Lord Wolseley are also quoted, and the example of the Canadian lumbermen is cited. It contains a maximum of thirst-quenching energy in a minimum of space.—*N. Y. Medical Journal.*

The National Association of Dental Examiners.

Notice is hereby given that the next annual meeting of the National Association of Dental Examiners will be held at Washington, D. C., commencing at 10 o'clock a. m., Thursday, October 13th, and continuing in session the 14th and 15th. The headquarters will be at "The Hamilton," Fourteenth and K streets, opposite Franklin Park. The rates will be \$2.00 and \$2.50 per day. Members can communicate with Dr. H. B. Noble for additional information regarding accommodations. The poll-vote closed August 9th, with 72 votes for Washington, 20 for Louisville, 17 for Chicago and 12 for Omaha, balance scattering.

CHARLES A. MEEKER, D.D.S.,
Secretary.

29 Fulton St., Newark, N. J.

Tempering Instruments.

After filing the steel down to the required thickness, polish it, then decide where and how you want to bend it. Heat and bend while it is still hot, using a copper or brass hammer, which will not dent the steel as much as a steel one. Now, after you have it in the required shape, polish out any hammer marks that might be on it, and you are ready to temper. To do this you first coat the instrument with a layer of wet salt and dry it on; this will prevent any scaling; bring your oil or water near to your gas flame. If the instrument is small it is best to hold the burner so that the flame is just over the water, for, if you have the flame away from your cooling fluid, in bringing the instrument to it it loses some of the heat, and your temper will not be as good. Having everything in readiness, heat to a cherry red and suddenly plunge into water. Then polish, being careful not to break the point, which is very brittle; draw the temper by heating quite a distance

from the point, using a small flame, watching the colors carefully, so that you will have a straw color at the cutting edge, and blue color at the point where the greatest strain comes; this being a spring temper will lessen the liability of breakage.

When the temper is drawn sufficiently, plunge into cold water and give a final polish, which is easily done by having leather wheels or buffs, five or six inches in diameter mounted on the lathe, using on them a combination of paraffin and emery powder; finish with crocus or rouge. A great deal depends upon this polish, for the finer it is, the easier it will be to keep the instrument clean and in an aseptic condition.—*Dr. B. C. Boeske, in Pacific Medical Dental Gazette.*

Painless Alveolotomy.

A method attributed to Dr. Black and others is to dry the gum, and then with a plugger a drop of carbolic acid is placed directly over the place where the apical space is supposed to be, letting it rest a moment; then commence removing with an instrument the tissue. In a few moments apply another drop of acid and remove as before, repeating this from time to time, and in a short time the alveolar process can be penetrated, and with a bur drill make the entrance direct to the apex of the root.

Spreading Gold in Filling.

Dr. E. A. Boyce, Chicago, speaks with force and reason in favor of round-faced instruments for spreading gold. He says a flat-faced instrument will not spread, and describes his favorite instrument, the face of which represents the arc of a circle, fashioned very much like a pestle. This leads to the suggestion that from round-headed burs suitable instruments may be constructed.

THE
American Dental Weekly
 ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Subscription \$2.00 per year; \$1.00 for six months—including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited.

The editor is not responsible for the opinions of contributors.

Advertising rates sent on request.

Atlanta, August 18, 1898.

Professional Recruits.

What Dr. Taft writes we always read with interest. His experience and standing in the profession entitle his opinions to much consideration. But we cannot but be a little amused at his schemes for providing homes for the sixteen hundred annual recruits to dental ranks, with an increasing ratio. It will be seen below that the dear doctor is laying hold of the recently acquired territory for homes for some of them, and he goes to foreign fields with others, while he decimates the veterans at the rate of 480 per annum.

There is no doubting the fact that the multiplying of colleges is rapidly multiplying the ranks of the profession. With the good doctor's figures, we will have to acquire more territory before many years to find homes for our recruits.

There is a sad fact in his editorial. It is that many of these recruits are going out unfitted for professional life.

The very face of the dear doctor's article shows that he feels that the profession is being overcrowded, and that, too, with many who, as Sam Jones would say, are not "fitten to be fit." There are only two classes that will agree that the output is not too great.

Here is Dr. Taft's editorial:

By referring to the commencement exercises of forty of the principal dental colleges of the country for the present year, it appears that there have been 1,620 graduates. This will make quite an addition to the ranks of the profession; whether more than enough to supply the demand, is a question about which there is much diversity of opinion.

There are very few who now enter upon the practice of dentistry by any other door than through our colleges, so that it is not a difficult matter to estimate the number of annual increase.

There are now not over 24,000 reputable dentists in practice in this country. As to whether the new recruits are more than sufficient to supply the demand, three or four things may be taken into account.

1st. The death-rate per thousand. Estimating this at twenty per thousand per annum gives 480. It is probably not wide of the mark to estimate that a number equal to this will withdraw from the practice of the profession per annum; this for various reasons. Some on account of age, others for the temptation of some more lucrative business, others from manifest unfitness, and still others from a dislike to the profession. Now these influences are constantly operative in the withdrawal of practitioners from the profession.

Another point to be taken into account is that the country's population is constantly increasing, and on that account increasing the demand for the service of the dentist; and still further, if our country is to receive new additions to its territory, as seems probable now, that will occasion still an

increased demand. The probability is, from present indications, that in the near future the population of the country will be increased by many millions, by the acquisition of new territory and new people. It is true, doubtless, that such increase of population will not make a corresponding additional demand for dental service; yet doubtless there will be somewhat of increased demand in the immediate future, and it will increase rapidly as time goes on.

Another point to be considered is that the people of our country, and in all civilized countries, are becoming more and more intelligent in regard to the value of good dental service. The demand for such service is greater now than ever before, and is constantly growing.

Another fact which should not be overlooked is that there is constantly more or less of demand for dental practitioners in other countries than our own, and this is every year drawing quite a number of our best practitioners from the ranks of the profession. When all these things are taken into account it does not seem probable that in the near future the ranks of the dental profession will be overcrowded.

The people are now demanding better service than ever before, and a great many inefficients are dropping out, or being dropped out, because they cannot answer the demand for a better quality of service.

Calls are frequently coming for dentists better equipped than those who have occupied places up to the present time, and there are many places that have no dentists within a convenient distance, and some where persons are compelled to go many miles for such service.

Now, having made these statements, it is proper to suggest that a considerable number of the 1,600 newly introduced dentists who are now beginning their career are poorly equipped and will hardly be able to make a professional success, and this for two or three reasons. Some persist in taking an

educational course in dentistry who have no natural fitness or adaptation for it. Another class have not the perseverance, energy or industry to accomplish their educational work in an efficient manner. It is here suggested that these facts ought to be a stimulus to all our schools to exercise the utmost discrimination as to the persons they admit to their school, selecting and encouraging those who are well endowed, rejecting those in whom such endowments are absent, and exercising great caution in regard to those who are in an uncertain condition. Such care and discrimination would result in great benefit to the profession and immensely to the welfare of those who require the service of the dentist.

Oral Pathology and Practice.

Mention was made last week of this new book by Dr. W. C. Barrett. Since then we have had the pleasure of going carefully through it, and we are better prepared to emphasize the good impression the volume made upon us at first glance. It is an exceedingly valuable book, and while intended mainly for students, will be of great value to the practitioner. Dr. Barrett's own style is employed in its arrangement. The subject matter for each paragraph is well defined in heavy face type. The treatment of each subject is done in a clear, concise style—a style that should be borrowed by all book-writers. He has left out the superfluous. In fact the book of two hundred and thirty-nine pages treats on matter that the ordinary writers use thousand of pages to express themselves on. This is one value of the book that will commend it to the busy practitioner. In this day and time why should we have to look through a bale of straw to get a grain of wheat. If the kernels were presented, in all ways, without the straw, how eagerly they would be sought, and how helpful they would be. Before man's mind was taught to be active and quick, a writer could palm off a vol-

ume from a single text and trust to the plodder to find the germs, but not so now. He who wishes to be heard must speak so as to be heard.

By giving the contents a better idea of the practical value of the work can be had. There are sixty-five chapters, not long ones, embracing the following subjects: General Consideration; Bacteriology, Classification; Fermentation; Bacteriological Pathology; Septic and Aseptic Conditions; Inflammation, its General Characteristics; Changes Attending the Inflammatory Condition; Further Degenerative Changes; The Products of Inflammation; Diseases of the Gums; Stomatitis; Treatment of Stomatitis; Pharyngitis and Tonsillitis; Diseases of the Tongue; Diseases of Dentition, Treatment; Dental Caries, Treatment; Pulpitis; Treatment of Inflammatory Conditions of the Dental Pulp; Pericementitis; Alveolar Abscess, Treatment, Symptomatology; Deposits upon the Teeth; Pyorrhea Alveolaris; Facial Neuralgias and Paralysis; Sympathetic Disturbances; Diseases of the Maxillary Sinus, Treatment; Diseases of the Frontal Sinus; Cysts and their Treatment; Tumors and Neoplasms; Osteitis; Caries of Bone; Necrosis, Treatment; Hypersensitive Dentin, Treatment; Secondary Dentin, Pulp Nodules and Calcifications; Hypercementosis; Discolored Teeth; Abrasions; Pitted and Furrowed Teeth; Replantation; Transplantation; Implantation; Syphilis, the Primary and Secondary Stage; Tertiary and Hereditary Syphilis; Syphilis of the Mouth and Tongue; Physical Diagnosis; The Oral Tissues in Diagnosis; Wounds and Injuries, Treatment; Excessive Bleeding; Fractures, Treatment; Dislocations and Sprains; Shock, Treatment.

A philanthropist of a neighboring State has offered a number of prizes to the school children of his town who take the best care of their teeth during this summer.—*Maryland Medical Journal*.

War and Dental Caries.

A writer in THE AMERICAN DENTAL WEEKLY remarks that neurosis disappears in times of great national excitement; therefore, "if dental caries is largely the result of neurotic influences, as many believe, we may naturally expect a temporary suspension of the ravages of decay pending the Hispano-American war." If the Americans are nervous, what must the Spaniards be?—*British Journal Dental Science*.

Why! they will never have toothache again.

Repairing a Gold Crown.

Just suppose you have made a gold crown and in finishing you go through the shell, making an unsightly hole. If you undertake to solder this the chances are that you will have three or four holes caused by the solder melting out at the joints. To prevent this trouble, paint the crown all over the outside with whiting mixed thin except around the hole which you wish to repair, fill this with a plug made from gold foil, touch it up with a drop of borax water, and put a bit of gold solder inside; heat it with blow-pipe and success will be the result.—*E. A. Randall, D.D.S., Truro, N. S., in Dominion Dental Journal*.

To Make a Solution of a Definite Percentage.

Suppose an ounce of a five per cent. solution is desired. Multiply the number of grains (480) in an ounce by .05, which will give 24.00. Thus 24 grains, say of carbolic acid, added to an ounce of water, will give a five per cent. solution.

Suppose a dram of a four per cent. solution of cocain is wanted. Multiply the number of grains (60) in a dram by .04, which will give 2.40 (two and forty one-hundredths) of a grain. This added to a dram of water will give a four per cent. solution.

A Method of Resuscitation in Apparent Death from Anesthetics.

Herzog gives the results of some experiments he has undertaken on animals with the view of testing the efficacy of Laborde's method of "rhythmical traction of the tongue" in cases of apparent death from drowning and anesthetics. Laborde described his method at the Medical Academy in Paris in 1892. His attention was first directed to the question by observing the good results which he obtained in the laboratory on narcotized animals by rhythmical traction of the tongue. In eight cases of drowning, where the animal was kept under water for three and a half minutes, resuscitation took place in five cases. In Sylvester's method animals cannot be revived after one and a half minute's submersion. The directions for the use of Laborde's method are as follows: Place a piece of linen around the tip of the tongue, and grasp it with the thumb and middle finger; now pull the tongue forward with a jerk, and then relax it again; repeat this maneuver twenty times a minute. A sense of resistance is felt in the tongue before there is any attempt at respiration. Traction should be continued for thirty or sixty minutes. Herzog experimented on dogs. He administered chloroform till the respiration had ceased for one and a half minutes. He found that Laborde's method was useless in cases of asphyxia in a late stage of narcosis. In an early stage of narcosis, however, Laborde's method is distinctly useful when associated with other forms of resuscitation. Traction on the tongue is said to stimulate the centers in the medulla; this necessitates an increased blood supply to the part. The respiratory center is in close proximity to the centers concerned in the movements of the tongue; the beneficial effect would therefore act on both.—*Times and Register*.

To Retain Rubber Dam.

Dr. D. V. Beacock, of Brockville, Ont., stated some time since that:

"In cases where it is difficult to apply the rubber dam above the gum tie a knot on the silk; this will aid in carrying it under the gum; a double knot is sometimes necessary.

"In some cases, where it seems almost impossible to either hold or apply the dam to lower molars, it is a capital plan to take fine binding wire, double once or twice, twist about half an inch at the doubled end with a pair of pliers, run the free ends each side the tooth, to be enclosed at the neck near the gum—always from the lingual side—twist the ends on the buccal aspect of the tooth, and cut off the wire about half inch. The rubber can now be looped over each end of the wire and held secure. This is better than any rubber-clamp ever invented for some difficult cases, as there is scarcely any tooth in the mouth, no matter where situated, if the wire can be applied, but the rubber can be put on by using it. A flattened pin is also very useful for applying the dam in many lower teeth, by slipping it between the teeth till the dam is secured by ligating.

"To prevent rubber from slipping, dry the teeth well and apply a solution of saccharac varnish, or touch the necks of the teeth with powdered resin. This will often save ligatures. Rubber dam should always be touched with vaseline before applying."

Mrs. Fadde (faith-curious): "How is your grandfather this morning, Bridget?"

Bridget: "He still has rheumatism mighty bad, mum."

"You mean he thinks he has rheumatism. There is no such thing as rheumatism."

"Yes, mum."

A few days later:

"And does your grandfather still persist in his delusion that he has rheumatism?"

"No mum; the poor man thinks now that he is dead. We buried him yesterday."
—*Atlantic Med. Weekly*.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., AUGUST 25, 1898.

NO. 50.

ABSCESS UPON TEETH WITH LIVING PULPS.

In the department of pathology and therapeutics Dr. John H. Coyle, of the Board of Dental Examiners of Georgia, has frequently asked the question, "What is the cause of alveolar abscess?" To which the answer has been uniformly given, "It is the result of the death of the pulp." This is largely correct, in that the pericementitis, which follows the death of the pulp, often terminates in abscess, and in a great majority of cases may be set down as the cause of the disorder, but there are other causes of alveolar abscess, and upon the roots of teeth, whose pulps are still performing their normal functional processes, we have the testimony of men, whose professional character entitle them to the attention of the closest students of pathology.

In his usual scholarly style Dr. Edward C. Kirk, in the *Cosmos* for August, has given quite an interesting article on this subject, from which we will make some extracts. He cites several recorded cases, and then proceeds to differentiate between these and those other dento-alveolar abscesses which have their origin in infection through the pulp canal.

Before entering upon these extracts we will call the attention of the reader to the theory set forth, that since pathogenic bacteria cannot reach the point of disturbance through the pulp-canal, as in ordinary abscesses, they may exist in the blood stream and finding a place of least resistance of the vital potential set up an inflammatory

process, and especially when the gouty diatheses prevails. That the tissue elements of the dento-alveolar articulation are not entirely unlike those which make up the structure of the synovial barsal, and that these disorders may be already related to the gouty arthrites. That the abscess being established, the pus will work its way to the surface in the direction of least resistance, and that the point of discharge will determine the name by which it will be afterward designated. If it should appear on the gum surface opposite the root it will be called alveolar abscess. If it should find its way along the root and discharge at the gingival margin it will be one form of pyorrhea alveolaris. Now we have in this explanation the ethiology (and certainly it seems to be the most credible theory) of that peculiar disorder known as gouty pyorrhea alveolaris. A deep pus-bearing pocket, free from calcarious deposits, familiar to all practitioners, and would have been properly called abscess, had the contents of a pus sac found its way out upon the surface of the gum instead of along the root to the gingivis.

Dr. Kirk says: "Certain features clearly differentiate this form of abscess from dento-alveolar abscess caused by infection of the pericementum via the pulp canal. First, it is found upon teeth with vital pulps. Second, its location may be in any portion of the pericementum, while in the usual form the seat of infection is almost invariably the apical region. Third, it is a disease found only in patients who have reached adult life. The ordinary form of

dento-alveolar abscess may be found in patients of all ages. Fourth, it is almost invariably found associated with teeth of hypercalcified structure, i. e., those of flinty hardness, and in which the tubular structure of the dentine has undergone that nutritive change which tends to make them translucent. Ordinary dento-alveolar abscess is found in teeth of all grades of structure. Fifth, abscess upon teeth of vital pulps is found in mouths generally free from caries, and is in no degree dependent upon caries as a cause. Ordinary dento-alveolar abscess is usually found in mouths where caries is active, and the abscess is usually dependent upon caries as a predisposing cause. It will be seen that we will have to deal with a localized necrotic inflammatory process, in which the cause of the inflammation must be sought for in directions other than those which give rise to infective inflammation through the pulp canal.

"The pathological phenomena involved in abscess of the apical region, caused by infection via the pulp canal are so clearly made out that no one to-day has any reasonable doubt that the process is exclusively the result of bacterial infection. In fact, when any disease process is said to be the result of infection by micro-organisms, we have come to accept the statement as a full and satisfactory explanation of the phenomena manifested, and are apt to overlook the fact that such an explanation is merely the bold statement of the terminal facts in a complicated intermediate chain of cause and effect. Having admitted that an invasion of tissue by certain bacteria may lead to an inflammatory reaction upon the part of that tissue, and result in its partial necrosis and suppuration, we may ask by what means do bacteria produce such a result? Is it by their mechanical presence? While certain disease conditions produced by micro-organisms seem to furnish grounds for such belief, the evidence is not sufficient

to warrant the theory that they act generally as mechanical irritants.

"It has, however, been clearly demonstrated that in their vital evolution these minute organisms elaborate toxic substances which in some instances are of a high degree of virulence. That these toxisms, if present in sufficient amount effect a total functional paralysis of the cellular elements of a tissue and cause its necrosis and subsequent disorganization. It is then largely through the toxic character of their waste products (ptomaines) that they produce their effect upon living tissue. * * *

When we endeavor to explain the etiology of abscess of the pericementum of vital teeth, as a result of infection by bacteria the relation of cause and effect is less obvious because the possibility of access of bacteria or their ptomaines via the pulp canal is eliminated as a factor, and the modus of the infection must be sought elsewhere. There being no break in the continuity of the gingival attachment in the cases under consideration, we naturally consider the vascular circulation of the tissue as the most probable means of entrance for the irritant which is the exciter of the inflammation in question. That pathogenic bacteria may exist in the blood stream and, meeting a *locus minoris resistentia* in a tissue, may set up an inflammatory process at that point is a well established pathological fact, and it is not at all impossible that the immediate cause of pericemental abscess may be accounted for in that way. * * *

"Broadly considered, any inflammatory action is a disturbance of the normal process of nutrition, and this is true of both general and local inflammations, the disturbance being proportioned to the intensity of the irritative action. Where bacteria and their products are the excitants of inflammation, their effective invasion is conditioned upon the vital status of the tissue concerned. If the vital resistance of the tissue is sufficiently high it becomes immune

and bacterial invasion is impossible. The vital potential of a tissue is the result of the sum total of its nutritive processes normally performed. Any interference with the normal nutritive process, therefore, results in the diminution of the vital potential of a tissue, and renders it liable to invasion by bacteria with consequent inflammatory reaction. A disturbance of normal nutrition resulting in lowered vital resistance is therefore a precedent condition to effective bacterial invasion."

Dr. Kirk here goes into an argument to establish the analogy between the condition here under consideration, and that diathesis which finds its manifestation in lesions of synovial membranes, after which he continues:

"It is a fixed law of pathology that pus from an abscess tends to find its exit upon the surface, and that in so doing it follows the line of least resistance.

"Whether a pericemental abscess shall find its exit upon the gum surface or at the gingival margin is practically determined by its location on the root, which in turn determines the line of least resistance. And again, whether it discharges upon the surface of the gum or at the gingival margin, determines the name by which the inflammatory process shall be designated. If it should find exit upon the gum surface, it has been called with entire justification 'pericemental abscess,' but should exit of the pus occur at the gingival margin, then we have a pus pocket established which shows no tendency to heal spontaneously and by infection from the bacteria of the oral fluids becomes a chronic suppurating surface, and is, in other words, pyorrhea alveolaris.

"The writer hopes it will be clearly understood that the etiological explanation of pyorrhea alveolaris here given is intended to be applied only to the special form of the disease here described, and is not offered as a solution of the causation of the whole group

of disorders characterized by a flow of pus from the alveoli. * * * *

"That pericemental abscess is a tophic abscess of the dento-alveolar articulation is the view accepted by the writer hereof, and that so-called gouty pyorrhea and pericemental abscess are but the local expressions of disorder having a common constitutional origin, and differing in clinical expression merely by the accident of position is also accepted. Both conditions may be found upon the same tooth, and both are amenable to a constitutional treatment, which will successfully eliminate toxins from the blood, and improved nutrition. Local treatment is simply palliative, and success can only be hoped for when both local and constitutional measures are conjointly applied.

"The close agreement of the pathological phenomena as between gouty arthoritis and this form of pericemental abscess is striking, for when minutely studied all of the phenomena attendant upon a gouty arthritis and the conditions under consideration are quite parallel, even to the resorption of the articular surfaces of the bones, which finds its analogous in the apical and lateral erosions so often noted upon the roots of teeth, the seat of this form of pyorrhea."

D. D. ATKINSON.

To Remove Rust from Instruments.

Dip them into fatty oil and after a few days rub them off with a cloth moistened with ammonia; should still any rust remain, wash with diluted muriatic acid and polish with fine rotten-stone.—*Dr. Wm. Lombardino, Berlin.*

Burnishing Teeth for Sensitive-ness.

Dr. Holt, of Goldsboro, North Carolina, recommends this practice very highly for sensitiveness at the cervical portion of the teeth: Dry the tooth, heat the burnisher quite hot and burnish the sensitive part.

MIXING CEMENTS.

OXYCHLORIDE OF ZINC.

To sufficient liquid add about an equal amount of powder. Work small portions of powder into a soft cream with a stiff spatula, gradually adding more powder till it is all mixed, carefully mixing each part smooth before adding more powder, until a decidedly putty-like consistence is obtained. It should not be kneaded. If used for lining the cavity, place in position with the point of the spatula and press into position with pellets of cotton-wool, taking care not to let the fibers of the wool be entangled in the mass as it is setting. It should be introduced in small portions.

OXYSULPHATE OF ZINC.

Oxysulphate should be mixed to little more than a milky consistence, never thicker than ordinary cream when used for pulp capping. It should then be worked with the spatula until it begins to give the least perceptible evidence of thickening, when it should be taken on the end of a spatula and placed accurately in position by being pushed off by a moderately fine probe. It should not be worked after it ceases to flow under this instrumentation comparatively easily, or a very small pellet of cotton dipped in it directly it is mixed, and placed accurately in position, being readily secured in place by touching the edges with small smooth-ended instrument, or it may be taken up when just mixed on a spoon excavator, and if the convex part be placed next the pulp, the fluid will readily flow off the instrument wherever wanted. This takes five to fifteen minutes to set hard.

PHOSPHATE OF ZINC.

A portion of fluid should be poured on the slab and more than sufficient powder poured out near it. A bulk of powder about equal to bulk of fluid should then be mixed with the fluid gradually but quickly. This should make the mixture of a thick creamy consistence, then a little more

powder should be added and quickly and forcibly made into a mass by thorough working with spatula. The mass should be of putty-like consistence, though some varieties are directed to be made stiff. The mass should then be scraped up on a spatula and taken from it by the thumb and forefinger. A good zinc phosphate requires considerable force to take it from spatula. It should then be kneaded, not rolled, by two or three gentle motions of thumb and forefinger. The warmth of the fingers makes the mass slightly more plastic, and kneading produces a more homogeneous mass. This should be now rolled into an oval and elongated form for filling. It should be introduced by round or flat-ended pluggers, the pressure to condense it being on the face of the material; if instruments be touched on an oil pad it will prevent the osteo sticking to them and so being liable to drag. Superfluous portions should be worked so as to overhang or be cut off by the margins of the cavity, so that they will break off sharp leaving a clear edge to the filling at the cavity walls. This gives a harder surface to the filling than if cut down with emery discs.—*Mr. Halliday in Dental Record.*

Temporary Plates.

In the construction of such dentures, it does well to take the impression immediately after the teeth are extracted, cast the model, deepen the impression of the tooth sockets, and allow the necks of the artificial teeth to enter them. Some use continuous gum teeth for this purpose.

An excellent method, where only the front teeth are to be replaced, is to press a piece of soft compound against the anterior part of the palate extending to the ridge, and set the teeth in position in the mouth, fit this, intact, to the model, deepening the sockets to accommodate the necks of the teeth, wax the teeth in position from labial surface, remove the compound and adapt the base plate.

REPAIRING PLATES.

Dr. R. Ottolengui, in the *Dental Cosmos*, gives his method for repairing plates. He says:

"My practice for a long time, when repairing extensive fractures, especially along the median line, has been to remove the old rubber entirely and replace it with new. This practically is reproducing a plate, except that the old teeth are utilized. The method is as follows:

"The edges of the fracture are brought tightly together and firmly held by drilling holes on each side of the break and tying with linen thread. A model is then made of the palatal surface, the plaster being used thin enough to assure a sharp impression. The plate is not oiled or soaped, but should be wet so that the plaster will flow accurately. This model is trimmed so that it is no larger than the circumference of the plate itself. It is set upon a piece of glass, and, being thoroughly soaped, plaster is built up against the model and external surfaces of the teeth, up to and even with the masticating edges. When set this rim is trimmed smooth, and a third layer of plaster is poured over the lingual surface of the plate, extending over the exposed cutting-edges of the teeth and slightly lapping upon the rim of plaster which was poured secondarily. When this in turn has set, it is pried off carefully; next the outer rim is cut along the median line with a knife, until it can be separated in two pieces. Lastly the threads which hold the plate together are cut, and the plate itself carefully removed from the model. The teeth are now to be taken from the old rubber, thoroughly cleansed, and returned to their places in the rims, which are to be set in position against the model. Enough wax is run in to hold the teeth and models together, but no attempt is made to "wax up" the piece in the ordinary meaning of the term. These models with the teeth in place are then flaked in the lower half of the

flask. When the surrounding plaster shall have set, the third part of the mold is placed in position and the upper ring of the flask put on, when plaster is poured around it. Thus when the flask is opened we have a mold for our new plate which was really an impression of the old, and consequently the new plate will be reasonably like the others.

"It may be well to mention here that when it is known that the patient is apt to again break the plate along the median line, a precaution against this should be taken. To accomplish this a duplicate outer rim should be made before taking the teeth off of the rubber, and this rim should be removed in three pieces, so that one piece holding the four incisors (or the two central blocks where gum blocks are used) should be in one piece. A stout platinum wire should be bent so as to touch the pins of all the teeth, and when waxed against them the teeth should be invested and the platinum bar soldered direct to the pins of the teeth. Thus the incisors will be united, but will still assume proper position in the mold, and this bar will supply sufficient strength to prevent recurrence of fracture, whereas any bar of metal placed in the rubber and not attached to the teeth weakens rather than strengthens the plate."

Reflex Neurosis from Calcification of the Pulp.

The many puzzling pains encountered by the dental surgeon, due to reflex neurosis, makes all such cases of special interest. Dr. H. C. Register says he had an interesting case that commenced over two years ago,—a lady who, after being under the care of a physician for perhaps two or three weeks, suffered very intensely with neuralgic pains through the base or occipital portion of the cranium and through her eyes. Getting no relief, she concluded that she would have me examine her teeth. On careful examination, I found the first bicus-

pid gave some response to a very hot blast of air, but could get no response from any of the other teeth by tapping, by cold water, or by any of the tests I used, with the exception of the blast of hot air. That gave me the impression that there was something unusual the matter with the first bicuspid. I concluded to go into the pulp, and I found that it was affected with calcification. It was the only positive condition of granular calcification of the pulp that I have ever had in my practice. In breaking up the remainder of the pulp, it was extremely painful, but ultimately I did succeed in doing it, to her entire relief. The pain in her head discontinued, and she was a well woman, and continued so until about two months ago, when she said the same pain was reappearing, more markedly in her eyes than anywhere else. I found by tapping the second bicuspid that a little soreness was present, and upon entering it I found complete calcification of the pulp. I cut until I was afraid I would go into the cementum and alveolus. I did reach nearly the apex, and there I found an infinitesimal portion of pulp matter which was exquisitely sensitive, so that it was with great effort that I succeeded in destroying it.

Gingivitis and Its Relation to Crown-Work.

Gold in the mouth becomes charged with electricity when the metal rests upon gum-tissue; like a plate, no harm is done when only small portions rest upon the gums or under the gums, that portion receives the amount of heat and electricity that is received upon the whole surface. I know from experience that hot water alone produces severe pain on the sensitive dentine below the gum line. That coffee increases the current from the effects of the carbon in the coffee acting upon the saliva. I find that bridges are worse than single crowns, having more gold surface to gather the

electricity. Bear in mind that in physics intense heat can be produced by electricity. In animal life the range is between freezing and 100.3—4° above. Cataphoresis teaches that intense currents destroy gum tissue; feeble currents, for a long period, produce like effects on organized bodies. It is a natural law that gold terminating in a band under the gum causes an abnormal condition, as seen in connection with crown-work. Perfection in fitting cannot set this law aside. As a remedy for sensitiveness of dentine, silver is the most effectual I have used. Shortening the band, so as not to extend beneath the gum, is usually a remedy for inflammation.

With the above explanation, aided by evolution in practice, with a better general understanding of oral electricity, I will try to make plain why gold fillings are not compatible with dentin in teeth of children, or in deep-seated cavities where the tissue is a conductor, without an insulating lining. As above stated, gold worn in the mouth becomes the positive plate, or pole, of a battery. During mastication or mingling of positive and negative elements with saliva, gold crowns are highly charged, and the current passes into the gum-tissue when the band extends under the gums. That is, the gold in contact becomes an electrode. To carry out the correspondence, every gold filling at a point nearest the pulp, or any part of the walls of the cavity which may be the best conductor, is an electrode. Where the dentin is normal, or when the dentin has been protected so as to insulate the current, no harm follows. Where the current continues, dissolution of the lime salt is the result, though it may be years in doing its work. To relieve pulp-irritation caused from thermal changes, I have removed large gold filling which was done by different operators, and had given no trouble, nor did they show indication of leakage, and found the dentin covering the pulp decalcified, a nice organic conductor.

The same principle is active when children's teeth are filled before becoming dense enough to insulate the thermal changes; in this case all of the cavity walls are softened.—*Dr. S. B. Palmer in Dominion Journal.*

Filling Roots.

Dr. W. C. Barrett says: "No root was ever yet in proper condition for filling when it was damp, and that if the tissues above the foramen are yet breaking down, there will be serum about the apex, and this will find its way into the canal and make it damp at the extremity. The presence of moisture can best be determined by thrusting a smooth broach to the apex, withdrawing it and quickly wiping it upon the rubber dam. If it is not entirely dry, the traces may be seen upon the rubber.

"Perhaps the best dryer for root-canals is hot air. If a common valveless chip-blower be exhausted of air by pressure upon the bulb, and the point be held just above the flame of a gas burner or alcohol lamp, it may be filled with air as hot as desired. If now the point be placed in the cavity, a current of air so hot that a few blasts will raise the temperature of the whole tooth above the point of comfort may be injected. This will dessicate it completely. If the root is to be filled with chloro-percha, it should now be well drenched with eucalyptus and the hot-air current again directed upon it, until the volatile parts are driven off and the remedy caused to penetrate well into the dental tubuli.

"The eucalyptus is a partial solvent for the gutta-percha, and the latter very readily flows where the former has penetrated. Gutta-percha points may then be driven into the canal until it is full, and the dentist will have the satisfaction of knowing that every point has been occupied by the root filling. Of course due care must be exercised to avoid crowding the filling through an open foramen.

Treating Mummified Pulp.

Some time ago Dr. Younger, of San Francisco, gave the following:

"First sterilize the whole contents of the pulp chamber and canal with a solution of carbolic acid. Do not attempt extirpation until this is done. Plenty of time, too, should be taken for this, as it is very important. If necessary employ two or three sittings at this task. Having thoroughly sterilized the tooth and its contents, proceed to break up the connection of the pulp at the apex, and take it out bodily as near as possible. If any symptoms of necrosis are present, do away with all trouble by the use of lactic acid, which acts as a solvent of the sequestra. Sulphuric acid is entirely too strong to use in the treatment of teeth in this connection. After having rid the tooth of the offensive pulp, fill the canal with cotton saturated with a weak solution of carbolic acid and dismiss the patient for the time."

Artificial Teeth an Evil.

The following paragraph we take from the *Brit. Jnl. Dentl. Science*. It is a strange assertion, and stranger still, it appears to be indorsed by that journal:

"It is affirmed that the dentist's ministrations are not an unmixed benefit in that the presence of a powerful mechanical cutting and chewing apparatus in elderly mouths is very apt to lead to the eating of too much and unsuitable food. More meat, for instance, will be taken than would be the case had it to be masticated with worn or defective teeth or toothless gums. The teeth are those of early youth, the stomach may be fifty, sixty, or seventy years old, and there is thus a lack of balance which must lead to trouble. The stomach should also be renewed, and that would lead to the necessity for the renewal of some other vital organ; in short, there would have to be an entire rebuilding upon modern and scientific principles."

Treatment of Pyorrhea Alveolaris.

Dr. A. W. Harlan, in a paper read before the N. Y. Odontological Society, and published in the *Cosmos*, gives his treatment of pyorrhea as follows:

"Remove deposits and necrosed bone thoroughly, and then inject the pouches or pockets with, first, for one week, a bichlorid solution, one to one thousand, made with hydrogen peroxid, say one grain to two ounces of the peroxid, and five grains of tartaric acid. Later I use at first a strong solution of trichloroacetic acid for two or three visits, about five to eight per cent. in distilled water. When I find that the case is doing well, say at the end of two or three weeks, I begin to use about a five per cent. solution of alumnol, in water, to which is added about three per cent. of resorcin.

"I usually flavor this with oil of wintergreen to render it pleasant to the taste (any other oil will do). I inject this every other day or every third day, until the pockets are closed with a new growth. Where there is no necrosis of the process I use the zinc iodid solutions, one to three per cent. in distilled water. The patient must use, during the whole course of the treatment, either a hydronaphthol wash or boro-glycerol mouth-wash from five to ten times daily.

The hydronaphthol wash is made as follows:

Hydronaphthol	gr. xx.
Alcohol	oz. iii.
Oil cassia	min. iii.
Water distilled	oz. xx. M

S.—Dilute with water if necessary.

Or a boro-glycerol wash, one ounce to twenty of distilled water. Frequent massage of the gums is recommended. Loose teeth are banded with pure silver, or silver ninety-five parts and gold five parts. Pure water is recommended, and frequent bathing is insisted upon, except in the case of the extremely aged. Personal habits of modera-

tion are advised in all things, especially in eating and drinking. I regard a perfect occlusion as important, and accomplish this by grinding the teeth when it is demanded.

"Any intercurrent constitutional malady is left to the medical adviser.

"The above treatment, if persisted in faithfully for three months, will generally effect a cure. If it does not, I allow the patient to go for a month, and recommend and give the case a second period of this vigorous treatment for another three months. At the end of that time the subject will appreciate the necessity for following your directions, and with his co-operation the case will yield gratifying results."

From Centigrade to Fahrenheit.

The *Dietetic and Hygienic Gazette* for August gives the following rhyme, which may be of service to some of our *confrères*:

From Centigrade to Fahrenheit,

'Tis easy to divine—

You first must use arithmetic

And multiply by nine,

The answer now divide by five,

And then you have in view

The very number that you seek

By adding thirty-two.

From Fahrenheit to Centigrade,

However, it is plain—

You first must take the thirty-two

And multiply again;

But this time only by the five,

And then you draw a line

Straight up and down, in order that

You may divide by nine.

Truing Corundum Wheels.

To true up a jointing or other corundum wheel, take a straight-edged piece of sheet-iron of about No. 22 gauge, and while the moistened wheel is revolving on the lathe hold the straight edge of the iron against the face to be trued up. A few moments only are required to obtain a surface equal to that of a new wheel.—*Jr. J. D. Patterson.*

THE
American Dental Weekly
 ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - - ATLANTA, GA.

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription \$2.00 per year; \$1.00 for six months—including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited. The editor is not responsible for the opinions of contributors. Advertising rates sent on request.

 Atlanta, August 25, 1898.

Subjects for Consideration.

Extremes in theory and practice are alike hurtful, and hinder progress in establishing practice on a correct and reliable basis.

For instance, to contend, as some do, that pyorrhea-alveolaris always commences at the apex of roots of teeth, and is most common with persons of gouty diathesis, and must be treated constitutionally, remedies internal—a theory that cannot be sustained and will not hold good in practice.

Results in practice are the surest and best tests of the correctness of theory.

To advocate the theory as correct, that the disease (pyorrhea) is incurable, unless all the teeth involved are extracted. Cases are treated daily and cured beyond the possibility of doubt or questioning and without the extraction of a tooth.

To advise (some do) the entire removal of the cementum to apex of roots, with sharp

scrapers, as essential to a cure, also to devitalize and extirpate nerves to check progress of the disease and to strengthen and make the teeth firm in sockets. Fancy theory, without a practical feature to sustain, and encourage faith, and hope for good results.

To advise the removal of deposits from two teeth only, at one sitting, embracing from one to two hours' time, then to wait several days and treat two more and so on, involving a period of some weeks. Decidedly a prolonged and tedious process, and infliction of unnecessary discomfort to patient. Provided smooth-edge scalers are used, the operation of removal of deposits, in a large majority of cases, when the disease is far advanced and roots well coated with deposits, can be as thoroughly accomplished at one sitting of two or three hours, and in every particular as satisfactory results obtained as if three or six months were given to the operation. Tax to patients on any line of treatment should be avoided when possible.

To advocate the cutting of grooves in the grinding surface of teeth and imbed gold bars, secured with cement; to hold teeth firm in sockets, with a view to retaining the teeth and effecting a cure. Decidedly a radically extreme feature in practice, that does not promise compensation in results equal to cost.

To proclaim, as has been done from high sources, that the removal of deposits from roots of teeth in treating pyorrhea, is non-essential, as from another high source it has been advised that the disease be treated with cautery, "burn it out as if you were treating a cancer and let it alone." Erroneous theory and extremely severe and bad practice.

To inject cocain in the gums, as some advise, and to pack the pus pockets with sundry remedies to keep out microbes. Unreasonable and useless, and out of line for best results.

To recommend the use of a dozen or more remedies as necessary in treating pyorrhea. The custom of many dentists.

Two or three judiciously selected remedies, rightly applied, are ample for cure, after removal of deposits.

To advocate, as has been done, that teeth can be strengthened in sockets and comfortably retained for utility, after loss of two-thirds or three-fourths of alveolar support, and that the gum tissue can be so treated as to reunite to the cementum after the periodontal membrane has been destroyed by the disease.

Experiment to determine correctness of such theory, and universal failure of success, I am sure, will be the result. To use sharp edge scalers, or scrapers, for removal of pyorrhea deposits.

Bad practice, abusive and hurtful, and is often the cause of non-failure of cure.

To advocate and practice use of rubber wheel, pumice and water in cleansing teeth for a patient, often involving more than an hour's time.

Great loss of time and no extra advantage. With a suitable tooth-brush, dilute sulphuric acid and pulverized pumice or silex, the operation of cleansing can be as thoroughly accomplished in five minutes time, and no injury whatever to the teeth.

To condemn (many do) the use of sulphuric acid, and create prejudice. Likewise, nitrate silver.

Rightly and reasonably applied, both are harmless and are most excellent remedies, producing desired results under some circumstances.

Plain, practical common-sense practice is the only line of action for true progress, and is the safest and best action for the preservation of the natural teeth and gums in a normal state (comparatively), and upon success on such a line hinges truly the *true science of dentistry*. Therefore it behooves us to give thought and just *consideration* to *extremes* in *theory* and *practice*, and fight

against error as it presents, and try to keep in the channel of true conservatism, in theory and practice, for preservation of teeth, that others in following the line we blaze and travel may not go wrong and wreck, and feel that they have just cause for grievance and censure.

B. F. ARRINGTON.

Pulp Putrescent—To Avoid Pericemental Trouble in Removing.

To avoid pericementitis, abscess, etc., in the removal of putrescent pulps, exclude absolutely the entrance of saliva, use clean instruments, flood cavity with some good antiseptic, and at first sitting remove all of the pulp possible without letting any of the matter or the end of the broach pass beyond the apex. The patient should be told to give notice on first sign of sensation, as the main point is to avoid, under all circumstances, the passage of anything into the tissues beyond the end of the root. This done, follow with loose dressing of camphor-phenique containing about ten per cent. of aristol. If a second dressing be necessary, use oil of carria with aristol in same proportion as above. Vapors of the former are less likely to produce irritation than those of the latter. In using peroxide of hydrogen, pyrozone, or natrium and kalium, care must be taken to keep the entrance to canals from clogging, else the gases set free may pass the other way and carry with them matter beyond the apex, which must be avoided.—*Dr. C. Keyes, Rio de Janeiro, Brazil.*

Changing Cohesive Gold to Non-Cohesive.

Dr. Black's method of making non-cohesive gold, is to place a book of gold in a drawer in which there is placed some ammonia, on a piece of cotton, if preferred. An open box or vial of cylinders will also become non-cohesive in the same way.

Tube Tooth Crown.

Make for the root a cap, pierce this with a post long enough to reach to the end of the canal, and to extend the length of the crown, fasten the post and cap with a little sticky wax, remove and solder the two together, place the pin and cap in position, select a tube tooth and grind to fit the cap and to articulate with the antagonist, remove the post and cap and attach the crown with cement or with sulphur by heating the pin, coating with sulphur and pressing the crown on. After the crown is fastened to the post it can be ground to the circumference of the cap. A crown a little larger than the cap will allow the reduction of size by grinding.

ANOTHER WAY.

Band the root, and cement the post in the root, grind the crown to fit the band, place cement in the band and in the crown, and drive the crown to place. This plan facilitates the setting of the post by giving free access to it.

To Make Pin to Exactly Fit the Root.

Take a piece of pine or orange wood and whittle it as near the shape as possible, and drive it into place with the gold plugging mallet; then remove the same and wrap around it a thin ribbon of platinum; insert it into the root and give it two or three taps to make it conform exactly to the shape of the stick; then remove both from the tooth, and remove the stick from the platinum, which leaves a core which may be filled in with any hard material, such as clasp metal, eighteen-carat gold, copper, or whatever you choose, being careful to protect the outer surface with a solution of whiting to prevent the metal flowing on the outside. This gives a dowel or pin which exactly fits the root, and upon which any sort of crown best for the case can be built.—*Dr. F. T. Van Woert, in Dental Cosmos.*

Woolly Asbestos as an Investment Material.

Woolly asbestos well saturated with water, forms an investment that in many cases fully replaces the usual plaster and sand, with the advantages that it is more cleanly to handle, does not run into the cracks and crevices we desire to fill with solder, and there is no waiting for it to harden. The blow-pipe flame may be safely directed upon it immediately. The pieces to be united, held together with hard wax, may be imbedded in it with the same facility as in plaster and sand. Without a moment's delay, the investment may be dried out and the wax burned off with the blow-pipe, instead of chipping it away, flux and solder applied, and the soldering completed in less time than is usually required for plaster and sand to harden. The investment does not crack, but with as little or even less mass than required of plaster and sand securely holds the parts together. Woolly asbestos is not expensive, and as it can be used over again repeatedly, the cost is trifling. With a little practice its use may with advantage be extended to many cases in which heretofore plaster has been considered essential.—*International Dental Journal.*

Fusible Metal Poured in Modeling Compound Bite.

For articulating bridge pieces, where the bite is taken in modeling compound, it can be better done by pouring the bite with fusible metal. Have a metal that melts below 212; melt in a spoon and pour in the bite. Even for any other articulation, this is good. Enough metal to fill the cusps in the bite can be poured, into which, after cooling, small nails are heated and pressed into the metal tips, and the remainder of the filling done with plaster, which holds around the tacks or nails.

Soldering Band-Attachments without Investment.

Some years ago Dr. Newkirk, of Chicago, gave the following method, which we think worth repeating:

Join all bands in the making with high-grade solder—20 or 22 carat. To attach a hook or a tube to a band, first hold the latter with a pair of moderately thick pliers at the point of union. That this may be kept below melting point and from danger of unjointing, place a little flux and 18 carat (or lower) solder on the spot where attachment is to be made, and melt with a fine flame of the blow-pipe. If a bit of tubing is to be placed, take a piece of wire six or eight inches long, or any slender instrument the point of which will fit within, having this covered with a thin coating of a thin mixture of whiting (or rouge) with water, to prevent a flow of solder inside the tube, or possible sticking to the wire or point which we are to use as a holder in making the attachment. Now, with a reasonably steady hand, holding the band as before with pliers, the tube, fluxed on the joint side, may be quickly and accurately fastened to the band over a small gas flame; a piece of wire may be attached in the same manner, leaving it long enough to serve for its own handle, and cutting off to proper length after soldering, or the hook may be held with jeweler's fine pliers.

Another method, and a good one, is to punch a hole in the band just large enough for the close insertion of the end of the wire, which should be fluxed, when it may be securely fastened with a bit of solder. This is an excellent way to attach screws of the "angle" jack-screw sort.

Speaking of this reminds me that the so-called "pipes" of the "angle set" are identical with those kept in stock by the wholesale jewelers under the name of "joint wire," in three or more sizes, and sold at

about a cent an inch, German silver. The large size is available for jack-screw and traction purposes, with No. 18 gauge wire screws; the smaller for use in connection with spring wire for rotating teeth. This "joint wire" is also available for tubular posts in crown-work—being very strong and made with absolute accuracy.

To Retard or Hasten the Setting of Plaster.

Dr. Beacock, of Canada, says: "To delay the setting of plaster of paris use a little vinegar; borax will also retard its setting. Sugar, salt and sulphate of potash will materially hasten the setting, as well as harden it; marshmallow toughens it. Marble-dust, mixed with plaster, prevents its expansion, makes it stronger and better able to withstand heavy pressure, especially good for celluloid work."

Testing Vulcanizers.

By means of a small force-pump that will drive water through a small tube into a vulcanizer, this can be tested to four or five times the pressure it usually undergoes in use. The water test involves no danger whatever; a small hydraulic force-pump can be made at a few dollars cost by any intelligent mechanic. Any pressure-gauge can be adapted, and the appliance is always ready for use.—*Dr. Wm. Dunn, Florence, Italy.*

Treating Sensitive Dentine.

In sensitive dentine, when patients are extremely timid, Dr. Bogue dips a pledget of cotton into carbolic acid, and then into powdered cocaine, and places it into the cavity. This, he says, will obtund the sensibility enough to use granulated chloride of zinc, with little or no pain. In ninety seconds the insensibility of the cavity is complete.

THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., SEPTEMBER 1, 1898.

NO. 51.

THE RECONSTRUCTION OF THE UNITED STATES ARMY FROM A DENTAL STAND- POINT.

BY CHARLES C. STANLEY, D.D.S.,
Columbia, S. C.

Dental surgery should certainly play a most important part in the reconstruction of the future standing army of this nation, and our government should be the first nation to adopt dental surgery as a feature of the army medical service, for in this, as in no other country has the science of dentistry reached such a high state of perfection.

It is thought that in the formation of the new standing army the volunteer forces will be called upon to furnish the required number, and as the supply will far exceed the demand, a very careful physical re-examination of applicants should be made. On each examining board there should be a competent dental surgeon, whose duty would be to thoroughly examine the oral cavity of each applicant, to ascertain if there be a sufficient number of teeth, or if the teeth are in a proper condition, or properly articulated for a thorough mastication of the foods, and only those who are thus endowed, together with the other physical requisites, should be accepted. The proper mastication of the foods is the first requirement for good health.

Considering now that those enlisted are thoroughly qualified, from a physical standpoint, means should be taken to guard the

dental organs with the same care as is taken to guard other portions of the human organism.

We now come to the main point of the subject: How can we guard the dental organs unless we have the skilled knowledge of the dental surgeon?

It is known that the susceptibility to the insidious process of dental caries is more pronounced among the enlisted men, and I am sure that under the existing circumstances the inclination and opportunity for the proper preservation of the teeth is very small with that class.

Some of the few derangements due to neglected dental attention (American System of Dentistry, Vol. III.): Fevers, gastric disturbances, facial neuralgia, neuralgia of the neck and arms, diseases of the salivary glands, tonsils, uvula, palate, tongue, antrum, and mucous membrane of the mouth, nose and throat, necrosis of the alveolar process and maxillary bones, etc., etc., etc. Many of those diseases would secure better attention from the dental than from the general surgeons, due to his knowledge of those subjects and his special training on that line.

In cases of fractures of the maxillæ or wounds of the mouth or face, the prognosis would be more favorable under his care.

Dental caries is a diseased condition of the teeth (Dental and Medical Dictionary), predisposing the oral cavity and the general system to disease, unless remedial agents are employed.

One of the inducements for enlistment is

the Government's pledge that it will care for soldiers, with all means available, in sickness. Can it or does it keep that pledge if it neglects the diseased dental organs or the hygienic condition of the oral cavity? The pledge should be as sacred as the oath of enlistment of the soldiers.

Speaking of the hygienic condition of the oral cavity, Dr. W. A. Barrows writes in the *Coamos*, August, 1898: "The mouth is the gateway for the entrance of disease; consequently it is right here that the fight must begin to keep the enemy out, for bacteria are present everywhere, and whether they exist in the foods we eat, the water we drink, or the air we breathe, some infectious germ gets in and is liable to develop disease whenever the natural resistance of the body is lowered and other conditions are favorable. But the supreme fight must be made against the enemy already within the entrance, for bacteriological research has proven that the mouth is a perfect "hotbed" of bacteria, or to express it more scientifically, the oral cavity is a prolific culture medium for the growth of micro-organisms. Some of them are harmless, some of them dangerous, but they are there anyhow and capable of producing disease, either local or systemic, and though the trouble may be only local at first, yet continued neglect will in turn affect the general health. While on the other hand, if one's vitality is below par and remains so from inattention, then the evidence of the fact will become manifest in disturbed conditions in the mouth.

From the above we see a close relationship between the cause and effect, and there should be stamped upon the minds of our congressmen and senators the fact that in a large degree a healthy mouth means a healthy body.

In all probability another "dental bill" will come before the House and Senate, and as it can make no enemy, but many friends by its blessings to the nation, it is sincerely

urged that those having the welfare of the country at heart will use their influence with the senators and representatives in their districts for its favorable consideration.

THE LANCE IN FIRST DENTITION.

There is no more critical period in the human life than when deciduous teeth are about to be erupted. It is a period to be dreaded by those who are to have the responsibility of raising children. Let the reader consider for a moment the conditions which prevail and the serious import of the process will be apparent.

This is a formative period with the child. The various organs are undergoing those structural changes which are to prepare them for service in after life; the brain reaching the first stage of development when an intellect is discernible; the nervous system sensitive to every touch and susceptible to every influence which is at variance with nature; the digestive organs being inured to more solid food; the teeth being developed by a process which does not seem to contemplate any interference. The crowns have been formed. As the roots are developed they are pushed forward; the gum tissue, yielding to the pressure, is absorbed and carried away to be distributed to other tissue—a process which requires an absolute harmony of the vital forces. As long as the absorption of the gum tissue is in proportion to the development of the root, an equilibrium is preserved, and no pathological symptoms are manifest. Under such harmony of forces the teeth would be erupted without attracting the attention of the most watchful mother. But let some interference with the vital phenomenon occur. Some acute indigestion, or inflammatory action the result of systemic derangement and there will follow a general disturbance of the normal equilibrium. The lymphatic system will fail to remove the gum

tissue in response to the demand from the growing fang within the bone. The result will be that the gum tissue will become an obstruction, a mechanical irritant by holding in check the eruptive movement of the tooth, and whether or not this is the case, need not at all be indicated by swelling or soreness (though these are often concomitant symptoms), for if the gum tissue is susceptible to irritation from the impinging crown, how much more so would be the delicate bundle of nerves and vessels at the other end of the tooth when the root is being formed and which is subjected to exactly the same pressure from the resisting gum, as the gum will be from the developing root. It is then from the apical region that the greatest disturbance issues, and since all this pressure is brought directly upon the pulp of an infant's tooth, it can only be comparable to the severest pulpitis in the adult, and while in that case only one tooth is apt to be inflamed at one time, there may be a half dozen or more restricted teeth in the case of the infant. I know of no better way to illustrate this than by holding a pin with the point resting upon the fingers of one hand while its head is pressed upon those of the other; the head of the pin will represent the crown of the tooth impinging upon the unyielding gum, while its point will indicate the reverse. Now where will the pain be felt? Of course at the point of the pin; likewise with the erupting tooth the seat of pain is at the end of the root, and as in adult teeth, is subject to all kinds of reflex action which in itself is sufficient to produce serious systemic derangement.

If the first treatment of odontalgia consists in removing whatever of irritants may be pressing upon the pulp, then the first treatment in the case under consideration would be to also remove the irritant by lancing the gum. It is a popular idea among mothers, and in a large measure, may be added physicians; that it is wrong to do this, in support of which no satis-

factory reason or explanation has been given. When the exceeding simplicity of the operation and the incalculable benefit which may result are considered, it seems very hard to conceive why the helpless and speechless infant should be left for days in agony or, as many cases, carried to the grave without performing it.

This is a common ground whereon the dentist and the physician may very properly meet. From systemic lesions, dentition may be impaired, and conversely from impaired dentition systemic lesions may result, going from one complication to another, which will demand the best skill of the healing art. The writer has had some experience in this class of practice, and can cite many cases where lancing the gums was the only treatment indicated and where relief as promptly followed. The idea that cicatrix forming (if the eruption of the tooth does not immediately follow) will render the gum more obstinate, has no foundation in fact, since cicatricial tissue is less highly organized and consequently more easily absorbed than normal tissues.

One case worthy of mention, is when, having been called to see a child which had been for days in its mother's lap with high fever, the gums were lanced over those teeth next in order of eruption, relief was immediate and the child was at play on the floor five minutes later.

Another case was reported by a very worthy physician to the writer hereof; he had attended a child which did not improve under treatment, but instead grew worse until it had convulsions one after another for twenty-four hours, when he discovered redness and swelling of the gums, which were then lanced, with the happy effect of immediate relief; the child having no more convulsions, and being rapidly restored to health. The cases that could be cited showing the great necessity of relieving pressure by lancing are countless. When there are no systemic complications, no further treatment will be required, and no amount of constitutional or general dosing will be a proper substitute for this simple operation.

D. D. ATKINSON.

RELATIVE MERITS OF MODERN BRIDGE WORK.

On this subject reported in the *Dental Cosmos*, Dr. Hoffheinz says :

"It is but a few years ago that the use of vulcanite has been assigned as the cause of much decline in prosthetic dentistry, but the mischief done by the rubber introduction is no comparison, in my mind, to the mischief done by crown and bridge work. I make the bold assertion that the indiscriminate use of crown and bridge work is to blame for a decline in operative skill. The readiness with which dentists condemn teeth nowadays as unfit to fill but safe for crowns is appalling. Had our predecessors done the same we would have been nearer an edentulous race than we are. The ease with which crown and bridge work can be done, if compared to highly skillful operative dentistry, is undoubtedly the main cause of the wholesale butchery of the wholesale unesthetic dentistry that confronts us in the profession to-day. How much easier to cover a first bicuspid with a gold crown than to insert a properly constructed contour filling, well condensed, well knuckled, highly finished. Is it altogether the physical labor that speaks against the laborious task of the tedious filling process, or has the self-advertising gold crown something to do with it? With many it certainly has. Within the last four weeks I have removed two crowns, for which there was not the least necessity.

"Dr. Van Woert said he wanted to talk of the slaughter of good teeth for the sake of introducing crown and bridge work. A large percentage is done for the sake of advertising. How many cases do you find that are not practical? Is it a beautiful thing? Yes, when it is first made. I can refer you to lots of Brooklyn gentlemen who knew at the time the amount of crown and bridge work I was doing; but it has all

gone up in the air. I believe to-day the introduction of crowns and bridges is the greatest curse to the profession that we have had in twenty-five years."

These gentlemen's remarks are strong and to the point and doubtless voice the sentiment of the Seventh District Dental Society, in which they were made. It is not crown and bridge work which has and is proving a curse to the profession but *the abuse* of it by charlatanism; it is not the introduction of rubber that relegated prosthetic work to fourth place in dentistry, but the abuse of it by cheap, slovenly dentists. Bridge work used with judgment and in honest hands is the greatest blessing in the shape of dentistry mankind has known. Rubber plate work has its place and plastic fillings in honest, careful hands are a power in saving frail teeth.

But the placing of these blessings in the hands of the unskillful botch is what is ruining the teeth of thousands. Is there no remedy for it? There certainly seems to be none. In all the avenues of trade and in all professional life, there is an element of robbers who manage to subsist by extorting money from the ignorant and thoughtless by the open process of robbery known as "tricks in trade."

The people will gradually become educated to know that skill cannot be obtained without adequate compensation, and there is no help for them until they learn this by experience. There is no need to worry over it. The same paints and brushes in unskillful hands will make but a daub which in the hands of an artist will make a thing of life and beauty. Crown and bridge work will be forced back by the inevitable to its proper place in dentistry, and the pains taking, skillful operator will go on saving teeth and replacing lost ones, using all the methods and materials known to secure the best ends. The man's deeds will surely find him out.

H. H. JOHNSON.

MULE DENTISTRY.

Perhaps but few of your readers are acquainted with the amount of veterinary surgery which is practised upon some of the mules abroad, some hundreds of pounds being expended annually in having veterinary dentists examine and treat the teeth of the pit-horse, and especially of the much-maligned mine-mule. Such is the case, however, and it is safe to say that the molars of these beasts of burden receive far more attention than do the teeth of many of the men and boys who are their daily co-workers in the underground caverns. A well-known veterinary dentist, who makes a specialty of treating mules' teeth, has more patients awaiting their turn for his services than, perhaps, any dentist in the "old country." At present he is engaged in treating the teeth of the 290 mules used in working the mines upon which I am engaged, which, by the by, is only one of a dozen similar big companies that find use for his services.

"GRATEFUL" PATIENTS.

A vicious, stubborn mule, that snaps at its driver, and kicks at the tantalizing door-boys, several hundred feet beneath the earth's surface, is neither an attractive nor a docile patient, so that the occupation of the veterinary dentist is not pleasant; but he has studied the peculiarities and wickedness of his long-eared patients, and goes about his work, showing neither fear nor favor no matter how vicious his patient may be. It frequently happens that just as he has finished doctoring the mule's teeth at a colliery, his patients are so regretful over his near departure that they make frantic efforts to keep a mouthful of his person with them, or, failing in this, they try to leave the imprint of one of their sharp shoes on his anatomy as an everlasting souvenir of their appreciation. The mule's stubbornness, however, is more than offset the dentist's grit and determination, and

he never passes a patient until he has closely examined its mouth, and treated all teeth that are in need of his attention.

WHY OPERATIONS ARE NECESSARY.

One of Mr. Mule's amiable weaknesses, though, is the habit of bolting his food, which frequently causes dyspepsia or other diseases, such as affect humanity. This bolting of his food is not caused by a desire to hasten his meal so that he can hurry back to his work, but because his molars or back teeth, with which he does his grinding, have more work to perform than his front teeth, with which he nips the pernicious door-boy and driver, wear away in the course of a few years, and become much shorter than the front ones, thus allowing the food to pass into the stomach without being properly masticated. In cases of this kind the incisors, or front teeth, have to be filed down an eighth or a quarter of an inch, so that they are all uniform. Filing the teeth is what the mule dislikes, and it is not much wonder, as he is locked in stocks, his head firmly secured, and then when his tongue is pulled to one side the dentist wears the projecting teeth down with an instrument that has a greater rasp than a coarse file.

NO LAUGHING-GAS GIVEN.

As soon as a mule sees a dentist with his bright steel instrument he seems so realize what is in store for him, and distends his nostrils and eyes. He moans pitifully when a tooth is being extracted, and seems to be happy when the diseased molar is drawn out, no merciful anesthetics being given. At times in showing his objections to the operator's heroic measures, the mule jumps over the bars behind which he is confined. The molars of a mule are $3\frac{1}{2}$ inches in length, while the incisors measure $2\frac{1}{2}$; and judging from his signs of pain the nerves are as plentiful and as sensitive as are those of human beings. An expert dentist operates on twenty-four mules a day, and a mule patient will remember the operator as long as he

lives. The extraction instruments are from two to three feet in length, and the entire case of instruments weighs fully sixty pounds. The teeth of every mine-mule are examined and treated, if necessary, once or twice a year, and as soon as the dentist puts in his appearance at a mine his former patients become unusually nervous and vicious. As you may well imagine, of course, horse-dentists in England have a great deal to do in this direction, but I imagine that twenty-four violently objecting patients per diem is rather out of the ordinary experience.--*Special Correspondence of The Road.*

[Dr. Taft, may now add this to his resources for providing business for the recruits.]

"Solila" and Similar Golds.

After many years of almost exclusive use of hand-pressure in filling with gold, I am convinced that there is one "best" method. After trying "solila," and other golds of a similar nature, I always go back to a non-cohesive gold, which is easily annealed. "Solila" serves one good purpose only for me—i. e., to finish with when a specially hard surface is needed. This gold, and others of a similar nature cannot be packed thoroughly well to the walls of a cavity; especially are they not adaptable to enamel walls and edges. Pellets are best in all cohesive work, but they must be prepared in a special manner. Machine-made pellets do not answer the purpose, nor those made from rolled strips, as all these will, when pressed upon with an instrument, rise at the ends, thus "crawling" away from the surface upon which they are being condensed.

Non-cohesive foil, cut into convenient strips and rolled between the fingers, being twisted at the same time, then cut into pellets and annealed (using a mica sheet) will produce the best of results. By this

plan a crisp pellet is made which will spread under pressure. Almost any kind of instrument can be used. Serrations are a disadvantage, except in large fillings when working on the gold alone, as an instrument with serrations of any depth should never come near the walls.

The above plan carried out, using hand-pressure, except in rare cases, when the objective point may be reached better with the automatic, will produce perfect results, or as near perfect as human skill can come, and with the least discomfort, both to patient and operator. The "crisp" pellets made by the above process will prove to be the secret of success in gold filling. "Solila" and other golds of same class are deceptions and snares.

E. P. BEADLES.

Anesthesia.

There has appeared a great deal of self-laudation over the present status of dentistry in many articles in different dental journals and such claims duly emphasized in many papers read before many dental societies, and I do not think that there will be any harm done to call attention, in a brief way, to *what others think* about us and our claims.

In the August edition of the *Therapeutic Gazette*, published at Philadelphia, is an article on Anesthesia, by Frank C. Hammond, M.D. When he comes to consider the mortality under the different anesthetics the following occurs: "*Quite a number of the patients have been under the care of a dentist.*" Very few of the dental colleges include the teaching of the use of anesthetics other than nitrous oxide; hence a large majority of the graduates of dentistry leave their *alma mater* with little theoretical and no practical knowledge. Is this not sufficient argument for the high mortality referred to this agent? (He refers to chloroform.) Indeed, graduates of dentistry should not be permitted to administer an anesthetic other than nitrous oxid, for owing to the lack of

primary teaching, they are entirely incompetent."

Now, before we give way to a feeling of indignation, let us inquire if the main points in this quotation are true. Do the majority of dental colleges fail to give proper instruction in so important a branch of practice? Is it true that a large percentage of cases of mortality from chloroform administration occur at the hands of dentists?

My impression is based upon personal experience in connection with dental colleges that *more is taught* on the subject of anesthetics than in the average medical college. My recollection as to the history of fatalities resulting from chloroform administered in dental offices is that *in the majority of such cases* A MEDICAL MAN WAS PRESENT and administered the chloroform. I challenge Dr. Hammond to a production of the statistics bearing on this point. Among dentists the fact is widely known, that the average medical graduate knows less of anesthesia than the average graduates of dental colleges.

JOHN H. COYLE, D.D.S.

Ancient Crown and Bridge Work.

American Dental Weekly:

I have many very interesting letters from a son who has, in company with his wife, been traveling and studying in Europe for the past year. Among them is one from Rome, July 17th, in which he says: "This morning at the Etruscan Musee we saw a piece of gold crown and bridge work discovered at the excavations of Roman ruins of Falerii. This skull and gold crown work was found in a hollow log which they used for burial, supposed to be 2,500 years old." Here he gave a rough sketch of the skull, with the bridge in position on the lower jaw, with sockets for four teeth, which were missing.

I don't remember that this find has ever

been mentioned in any of our journals, or used to antagonize the sweeping claims of the "National Tooth Crown Co." If not you are at liberty to use the item in your sparkling WEEKLY. Yours truly,

J. L. MEWBORN.

Memphis, Aug. 25, 1898.

Does Plaster Shrink in Vulcanizing?

On this subject Dr. F. A. Greene, in the *Dental Cosmos*, says: If you make a model of pure plaster there will always be a change in the shape of the model when the plaster sets, but if the same model is made of plaster and about one-third marble dust you cannot detect any change. You can test that in a series of cases in new work. Take your model and with a pair of compasses make little points at the condyles and then make a corresponding mark with the compasses on a piece of paper; after vulcanizing, where you use pure plaster, you will find a difference; but if you will do the same thing where you use marble dust with the plaster you will find that the compasses go into the same points. He had known as much as one-eighth of an inch shrinkage to take place.

Gutta-Percha and Canada Balsam.

An article on this subject by Dr. A. Os-good, in *Dental Cosmos*, gives the following method:

To make gutta-percha fillings stick, the essentials are a dry cavity and Canada balsam. It is also an aid in starting gold fillings. The balsam should always be hardened by placing in a porcelain dish and by a slow heat for several hours, so that when it is cool it will be a brittle, friable substance. Place a few pieces in a bottle and add chloroform until it is thin fluid and it is ready for use. The bottle should be adjusted so it will not tip over, as it is destructive to varnish and furniture.

He Likes It.

THE DENTAL WEEKLY arrives every Monday and is a welcome visitor. Much valuable information is obtained and some articles need further explanation; for instance, how can any one make an aluminum crown and fill the cusps with amalgam without destroying the crown by chemical action of mercury on aluminum? It is amusing to read the article in a recent issue, where the dentist and patient were surprised to find the aluminum crown with mercury attachment get hot and disintegrate. The contact of mercury with aluminum is sure to produce this result, so why should any dentist be surprised, or make a crown in that manner?

On page 594 of WEEKLY I read an interesting article by Dr. L. P. Bethel on "Dies and Swaging." I am personally acquainted with the doctor, as we were classmates, and I will wager a new hat that he is not over 42 years of age. How he could use babbitt metal for 48 years and fit plates without the shot apparatus for 53 years is a mystery to me.

On page 544 of WEEKLY is described a method of fitting Logan crowns. I have tried it and it is excellent. Thanks to Dr. Soule for the hint. W. H. BAILEY.

Chippewa Falls, Wis.

[It was a mistake allowing that item about aluminum crowns with amalgam filling to go in THE WEEKLY. It slipped in almost "unbeknownance," as Cuffy says. Aluminum make as good cheap crown but it does not need amalgam in it.—Editor.]

Home-made Mouldine.

Buy a brick of fine clay (get before sand has been added); pulverize it to a flour, then mix with glycerine to the proper consistency. This will make five dollars' worth of mouldine.

S. EWING SMITH,
St. Augustine, Fla.

Cocain Poisoning.

Dr. Harlan reports the following case in the *Dental Review*:

"Recently while getting ready to set a crown on the root of a central incisor, we placed a mat of paper about the size of a copper cent on the gum, saturated with a four per cent. solution of hydrochlorate of cocain, and in about five minutes the patient was poisoned. She became limp and was not conscious of anything for four hours. It was with difficulty that she was made to walk, and she talked incessantly and incoherently.

"She was given one nitrite of amyl pearl and was made to inhale stronger ammonia and was given five cups of strong black coffee. The quantity of the solution used was about four minims, some of which was undoubtedly swallowed. The recovery was sudden and complete after four hours of incessant labor. No after effects except some distress in the stomach on account of the large quantity of coffee. The next day she did not remember anything that occurred from the time she sat down in the chair until she was taken to the train to go home. There was no perceptible action on the pupils of the eyes, no perspiration, some drowsiness and considerable difficulty in locomotion. Speech constant and pronunciation correct. No action on the bowels or kidneys; respiration and pulse accelerated. Female, age about fifty."

More in the Occlusion than Finish.

It is well to pay more attention to the arrangement of the teeth than to the finish of the plate. A poorly polished plate may be worn with entire comfort, provided the teeth are properly arranged. But no matter how highly polished the plate may be, it can never compensate for well occluded teeth.

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THE
American Dental Weekly
 ISSUED EVERY THURSDAY.

Editorial and Publication Offices:

34 WHITEHALL ST., - - ATLANTA, GA.

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Send all matter relating to the literary department to B. H. Catching, 34 Whitehall street.

Send all matter relating to the business department to J. A. Chapple, Grant Building.

Subscription \$2.00 per year; \$1.00 for six months—including Canada and Mexico; other countries \$3.00 per year. Strictly in advance.

If local checks are sent, ten cents must be added to pay for collection through the banks.

Contributions of interest to the dental profession solicited. The editor is not responsible for the opinions of contributors. Advertising rates sent on request.

Atlanta, September 1, 1898.

The Dental Protective Association

Interest in this good organization seems to have waned since Dr. Crouse builded commercially, apparently, on it. And yet the two concerns are separate, though many do not think so. We are free to admit that the forming of the Dental Protective Supply Company has been a hindrance to the Dental Protective Association. Many men have thought that the money of the D. P. A. was used in the D. P. S. C. Such an accusation would be unfair to Dr. Crouse, as we do not believe that he has so used the funds of the Dental Protective Association. And yet the same man forming a commercial concern and giving it a name similar to the other, has caused a suspicion and unrest and almost distrust. It seems that Dr. Crouse's soul is in the work, and it may have been hard to find a man to take his place, but some one else should have been placed at the head of the D. P. A.

when he organized a commercial concern similarly named. He seems to think, when he massed his men into the Protective Association, that he could lead out commercially and they would follow. It was a very unwise step for the founder and leader of the Dental Protective Association to do. And, as stated above, when he did open up commercially, he should have given up the leadership of the D. P. A. It is very hard to separate the idea of the two organizations working as one. His venture commercially arrayed, and very naturally, too, the strong commercial concerns against him. He has seemingly fought monopoly to make fast another—at least that is the way it appears. The large dental manufacturers were friendly to the D. P. A., but when the leader seemingly incorporated it into the Dental Protective Supply Company the commercial concerns naturally turned against the D. P. A. Who could blame them? At the same time they have shown a liberal spirit.

To say the least of it, Dr. Crouse blundered fearfully when he organized commercially while acting as leader of the D. P. A. and naming his concern a name so similar to the first organization. We believe in the Dental Protective Association; and believe in the present attempt to have Congress enact a law forever making such a compact of professional men unnecessary. We must resist the patent monopoly, and can only resist it by standing together. Even the passage of a law by Congress would not obliterate the patent monopoly. They would go ahead and harass, as the old Goodyear Company did for so long, until their patents expired. Let's stand by the Dental Protective Association. We can all do this without obligating ourselves to stand by the Dental Protective Supply Company. We are not of it, even though we are members of the D. P. A.

If the commercial concerns of the country have used the Dental Protec-

tive Supply Company against the Dental Protective Association, they have only done that which anyone had the right to do, and have only caught the idea that lingered in the profession, that the two were one and the same.

They are separate, we are told. It may be hard to see the separation, but let's keep up the Dental Protective Association. If you are not a member, become one. Remember the Goodyear Rubber Company, one of the most infamous things that dentists ever came in contact with. Read the words below, taken from the *Western Dental Journal*. Read them carefully. You will see what the Crown Company will do with you if they are to be the masters.

Dr. Hetrick: Dr. Wasson has just informed me that I was to present the claims of the Dental Protective Association at this meeting. It is a subject of vital importance to every member present. What is your attitude towards the Protective Association? Have you paid your assessment? Are you trying to get new members? Kansas has furnished the least proportion in accordance with the number of dentists in the State, I believe, of any State in the Union. Yet we have been enjoying the benefit that has come from this association.

Dr. Crouse was unfortunate in naming his supply company. A great many people get the Dental Supply Company and the Dental Protective Association confused because of the similarity of the names and the same man being at the head of both of them.

Some of you, no doubt, think that the Dental Protective Association is fighting the suit brought by Dr. Donaldson against the Dental Supply Company. Such is not the case. I want to disabuse your minds of that at once. I had a circular from Dr. Crouse some time ago, in which he stated positively that the Dental Supply Company were looking after that themselves.

Have you ever stopped to consider what

it has saved you? I want some of these men who are the victims of the Goodyear people to give you some idea of what they paid in royalties. I hope there are a good many here this morning who are not members of the Dental Protective Association, that you can hear something of the trouble you are avoiding. Now, do we in Kansas want to take advantage of what some one else is putting up the money for? I will simply say to any of the members here, if you have not paid your assessment yet, I hope you will do so; and if there is some one in your town or some one you can reach and get them to send in an application for membership, it will be aiding a good cause, and yourselves will be benefited.

I will tell you, friends, I am getting pretty nearly to the point where I am ready to say to Dr. Crouse and the rest of them, "Close up this, and let the fellows stay outside that want to." They could make such a contract with the Richmond Tooth Crown Company if they wanted to. Where would you people on the outside be then? Of course, if you are all members, this talk is falling short.

The International Crown Company have notified the Dental Protective Association that they are going to bring suit again in New York State, and it is necessary to have money to defend that suit. The funds of the association have been exhausted. They have not been exhausted in paying salaries. Dr. Crouse has worked for years, ever since this thing was formed, without a cent of salary. Some of you may have thought that he was drawing a nice little sum every year, but I happen to have been on the Auditing Committee two years, and I know for those two years (I can speak authoritatively) that he received not one cent, and gave an immense amount of his time, ability and energy to this work.

Now, I think it is very small of us if we do not to a man rally to his support. They

cannot carry on litigation without money. We have reached a place where it is absolutely necessary to raise some more funds. When we signed our first note, or the constitution and by-laws of the Dental Protective Association, we gave a solemn obligation that we would pay another assessment if called upon. I want to call Dr. Patterson and Dr. Wasson out on this subject; both of them have had a good deal of experience along the line of paying royalties, and they know a good deal about the work of the Protective Association.

Dr. Patterson: I have, myself, read some of the letters from the International Tooth Crown Company, in Dr. Crouse's possession, and it is their purpose to commence suits, and without money to defend them, all the work that has heretofore been accomplished will be in vain. You know the methods of the International Teeth Crown Company. That they employ the best legal talent, and for many years they have been to a great deal of expense, instead of making any money out of the dentists, and they are bound to get that back. The fact of the matter is, as Dr. Crouse has told me, they expect to wear out the Protective Association. They think the expense the association has been put to already will cause its members to become tired of holding up Dr. Crouse's hands, and some of them will become suspicious of him. Some of you may become suspicious as to what becomes of your money. I do not think you need be, because it all has been accounted for to the last dollar. If the Protective Association does not lay down in this fight, and in two or three years, if there is a suit entered against you, and an agent comes through the country inquiring what you do under their patents, and there are a multitude of them, then you will regret that you have not paid this assessment or joined the association, if you are not now a member.

It is needless to go into the history of the intense annoyance and expense that many of

us, myself among others, underwent at the hands of the Goodyear people. It was simply unendurable, and I have not a question of doubt in my mind that if we obey this call which the Protective Association has sent out, that it will be preventive. Dr. Crouse is so energetic, has so many spokes to his wheel, and the best advice from the most efficient patent attorneys in the world.

Without this protection, these individual suits will follow, and they will go against you. Every one making crowns and bridges will be liable, not only in the coming time, but for what you have done in the past, and it will prove to you a burden that is simply intolerable. Every stranger who comes into your office will be looked upon with suspicion, and you will be in dread from morning until night, and oppressed with a horror which you cannot understand unless you have gone through it, as I have, and as have many others.

This small matter of ten dollars is going to keep this nuisance from you, and I think it will do if we stand by Dr. Crouse and the Protective Association.

Dr. L. C. Wasson: To speak of the burden laid upon us during the time of the maintenance of the Goodyear rubber patents are engaged in the business in which the Tooth Crown Company demand as large a percentage of the returns as on the rubber patents. I for a number of years was licensed by the rubber company, and finally got tired and concluded I could avoid payment if others did, so I refused to take out a license, and what followed? I was summoned to appear before a master in chancery in the United States Court, and made to produce my books showing the work I had done for five years preceding the date of the notice. I came to Topeka, as I presume some others of you were compelled to do, and exhibited my books showing the amount of work I had done; and when I was through, a judgment was rendered against me restraining me from further using the patents without first making a settlement with them, which

involved an expenditure of something like \$500, and this I was compelled to pay or quit the business. And I was also liable for the judgment whether I continued the work or not.

When this claim of the International Tooth Crown Company was made, I thought my experience with the other organization was of such a nature I would not take any chance of getting into further trouble of that kind. I took out a license, and my license required me to make a return every month in the year, in which I was required to give the names of the people for whom I had worked, describing the work done, and the amount of compensation I had received, for which blanks were furnished and returned to the company at the end of each month, accompanied by the remittance of 15 per cent. of the money that I had received during the month on all classes of work covered by the patent claim. I have receipts of that company for two years and a half, and I believe the smallest return I ever made was \$25; many of the returns went much above that. I found that pretty burdensome, and that is just the position many of you will find yourselves in if this Tooth Crown Company should be again successful and demand a share of our receipts.

I think it was in 1891 that I joined the Dental Protective Association. I paid the ten dollars, as did many of you, with the agreement that if at any time in the future it should be necessary, I would pay an additional ten dollars. I have had protection since I joined the association. I refused to take out a license with the Tooth Crown Company, and I have been freed from this great tax. Now, I believe it is a matter of policy to secure this protection, whether you believe in the methods of Dr. Crouse or not.

This claim of the Tooth Crown Company has been once through the Supreme Court and adjudicated. They now claim that a flaw has been discovered in some of the pro-

ceedings, and this has been taken advantage of to reopen the case and bring it back to the Federal Court of the State of New York for a new trial. An application has already been filed, and if they are successful, the matter will be referred back to the judge of the Superior Court in the State of New York for retrial. This involves the necessity for us to go at this thing vigorously, for if they are successful we will have to fight the battle all over again.

Non-conductor.

Occasionally it will be found, in near nerve exposures that a non-irritating non-conductor of greater rigidity than gutta-percha is wanted. Make a stiffish paste by mixing a small quantity of balsamo de-sarto with equal quantity of oil of cloves, into which rub a sufficiency of oxide of zinc. Apply immediately and spread over all the surface you wish to cover. Then add oxyphosphate cement as desired. You will then have an antiseptic as well as rigid non-conductor. Greater hardness of this paste may be had by using the balsamo and oxide of zinc alone, and will often be found a very desirable temporary stopping.

E. L. HUNTER.

Remember.

That large metallic fillings must not be placed too near the pulp.

That thorough condensation of gold, while very desirable, is not so important as its proper adjustment to the cavity wall.

That it is your duty to acquaint the patient with the true condition of his teeth.

That a chronic abscess will in the long run induce necrosis to a greater or less degree.

That while you may not admit it your neighbor may have more sense than you have.

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THE American Dental Weekly

Entered at the Post-Office, Atlanta, Ga., as Second-Class Matter.

\$2.00 Per Year, Including Mexico and Canada. Other Countries, \$3.00.

VOL. I.

ATLANTA, GA., SEPTEMBER 8, 1898.

NO. 52.

"UNCLE SAM'S" YARD-STICK

In the United States regular army the surgeons are selected with a view to intellectual attainments, which makes the office one of real honor, worthy of any man, and this in turn gives a stimulus to the whole medical profession to aspire to higher and better things. It fixes a standard to which all aspirants must accede or else they cannot work in a professional way for "Uncle Sam." Of course, in extraordinary times like the present, when volunteers are called for so largely, this rule cannot be so rigidly adhered to; but for the *regular army* service the applicant must be an educated man exclusively of his medical educational equipment.

If this example could be followed by the whole medical profession, dentistry as well, the world would be better off, for intellect is a potent factor in the degree of success attained in any professional service.

When the dental profession shall be composed of young men who have finished their degrees in the universities of the land, the populace will view it with confidence and respect, and there will be no more talk about the raising of the professional standard.

The profession is bound to be measured by the personnel of those who compose it. In the *Journal of the American Medical Association* Col. Nicolas Senn, H. V. S., chief of the operating staff with the army in the field, has this to say, which is pertinent to the question, showing the disadvantage at which the *National Guard* surgeon is placed who is not subjected to these restrictions:

"A proper and adequate preliminary education is exacted of every surgeon in the regular army; without it he is not permitted to pass the medical examination. Statistics show that a large percentage of the candidates are dropped at this stage of the examination. This is a reflection on the system of medical examination which continues to prevail in our country. About the only evidence of proficiency the national guard surgeon in most of our States is required to show is his diploma. It makes but little difference when the diploma was obtained. Evidences of a satisfactory preliminary education are not required. In consequence of such an easy entrance into the medical service of our State troops, many of the men who receive commissions are illiterate.

"By hard post-graduate work they often become good physicians, but they seldom if ever make up for the early defects of the education, which seriously interferes with a successful military career. Is it to be wondered at that when such shortcomings are discovered by their colleagues and officers of the line they do not command the respect their commissions should entitle them to?"

It may be asked, what difference it makes to the operator at the chair whether he is versed in Latin or in Greek, or can recite with ease the records of other centuries? I answer that it makes no difference in the mechanical adaptation of the gold he is using, but that these things are indispensable in a cultivated intellect, and he cannot name a single bone of the head without drawing directly upon the Grecian vernacular. Nor can he mention any tooth upon

which he operates, to earn his daily bread, without speaking a Latin word, nor speak of the world's progress without a knowledge of the past.

It may be asked, what difference it makes if he knows nothing of the higher branches of mathematics as taught in the schools of higher education? I answer that in some degree it makes no difference. Yet we beheld the world pause to listen when Dr. Bonwill demonstrated that the human lower jaw is an equilateral triangle—a geometrical proposition beyond the comprehension of the unlettered.

That our profession is improving in this respect there is little doubt. That it is becoming more attractive to men of cultivated minds, there is no doubt. That a few of its adherents measure up among the world's best intellects, there is also no doubt, but that it can grow to be a great and learned profession, supported by men of less than average education, there is serious doubt. The individual may command the confidence and esteem of all with whom he associates, but his profession will bear a stigma among all those people who recognize in their family dentist a social and intellectual inferior.

D. D. ATKINSON.

The Completion of Volume 1.

This issue completes volume 1 of the *AMERICAN DENTAL WEEKLY*. Pending a rearrangement of location etc., it will be the last issue from this office.

The *WEEKLY* has been a remarkable success, and the profession has so appreciated it that it will surely continue in an enlarged form.

Hemorrhage After Extraction.

Dr. Gledhill says to control undue hemorrhage after extraction apply to the alveolus, until full, pledgets of cotton thoroughly saturated with phenol sodique dipped in tannic acid. Hold finger on last piece one or two minutes to compress it.

ILLEGAL PRACTITIONERS.

Before, we have called attention to the fact that illegal practitioners are more numerous in Georgia than ever before. In one county a few days since, the judge of the superior court charged the jury about the dental law; the solicitor had his instructions. The result was six indictments against illegal practitioners in that county.

Letters have come from different sections asking if something could not be done to put a stop to such practice. It seems that the idea prevails that the Board of Dental Examiners are the ones to prosecute. This is erroneous. Every legal practitioner stands as a true exponent of the law. And it is the duty of each one, where there is a violation of the law, to inform the legal authorities of such. The judge's attention should be called to the fact and so with the solicitors. These legal officials without exception, almost, will see that transgressors are brought before the bar of justice. There must be some individual in each section to see that the dental law is brought prominently before the public and such an individual should be found in a legal dental practitioner.

If you know that the law is being violated and report it not, you are, in a measure a violator of the law, almost particeps criminis. Georgia has a good law, and its execution lies greatly with the reputable dentists of the State. There is no use hurrying to the dental board with the information that "there are a lot of bushwhackers in my section—can't you do something" simply go to the legal authorities, who are sworn to see that all State laws are executed. If the bushwhackers remain in your section undisturbed, it will be your fault.

It is said that rubber bands, tubes, etc., that have lost their elasticity and easily snap, may be restored by steeping for half an hour in dilute water of ammonia (aq. ammonia 1 part, water 2 parts).

Mercury; to Purify.

Dr. Beacock, says hydrochloric acid has no effect on mercury; sulphuric acid must be heated to affect it much; nitric acid acts on it lightly; by taking advantage of this, mercury can be purified easily from lead and many other base metals or impurities with which it is often mixed. Using one part acid to eight parts water, heated to 140 F., will not attack the mercury, and is sufficiently strong to eat up the baser metals the mercury may contain. Another way to purify mercury is to shake it well in pulverized sugar, then filter through a paper cone by making pin holes in the bottom of it. The mercury will filter through, leaving the sugar in the paper.

Plaster Impressions and Models.

The writer says he adds a small quantity of vermilion to impression plaster to enable him to distinguish the impression from the model. For easy separation of the two, he coats the impression with a thin mixture of linseed oil and vaseline.—*F. H. Goffe.*

[Excellent results are obtained by coating the impression with thin shellac varnish; after drying place in water while mixing the plaster; take from the water and shake off the surplus and pour the plaster.—*ED.*]

The Removal of Wax from the Ear.

According to the *New York Medical Journal* Alberto Ricci of Turin has ascertained that the solution of hydrogen dioxide possesses the peculiar quality of rapidly disintegrating the obstructive masses of cerumen in the ear. It suffices to pour into the meatus auditorius externus a small quantity of the solution and leave it for a few minutes in contact with the ceruminous plug. The latter is then most easily and safely removed by syringing with water, even though it were a hard concretion.

Assimilation of Iron from Cereals.

Professor Bunge, of Basel (*Zeitschrift für physiologische Chemie*, xxv., 1, 2; *Wiener klinische Wochenschrift*, August 11, 1898), finds that the iron of cereal grains is contained mostly in the bran. To ascertain the assimilability of this bran iron, he fed four young rats with white bread and four others with bran bread. The experiment was continued for two months, two rats being killed and examined at various intervals. The smallest amount of hæmoglobin found in the blood of the bran-fed rats was always greater than the largest amount in the blood of the other rats. Moreover, the bran-fed rats grew faster than the others.

A Cheap Method of Crowning.

Loop a platinum wire round the root and take impression with loop in position, cast in plaster and remove impression material; fit a plain backed tooth to model, squeeze the pins to loop, invest and solder with silver solder. Clean and replace on model, then build up masticating portion of crown with amalgam, forcing the amalgam well down into the root; polish when hardened. Roots too badly decayed to crown by any other system can be saved by this method.—*Dr. Barnes, Leghorn, Italy.*

Treating Syringes.

Syringes, whose canals have become obstructed so that a fine wire cannot be drawn through, are cleaned by holding them a moment over a flame; the foreign substance is thus quickly destroyed and driven off. If a wire has been rusted into the needle it should be dipped in oil before holding over the flame. To remove the rust from the interior of the canula, it is well to pass oil through the canula, then heat it, and rinse it out with alcohol.—*Exchange.*

For Burns.

Pinus canadensis cannot be too highly recommended as an application to burns, especially when very extensive, the skin being entirely removed. A weak solution in glycerine is squeezed from a sponge over the denuded surface, which is then dressed with some soft ointment, either with or without the *pinus canadensis*. Pain immediately abates, and the healing process is wonderfully rapid. The solution must be freshly applied as often as the dressings are renewed.

Treating Foul Pulp-Canals.

Dr. Jackson, of Michigan, says he finds the following dressing very valuable in treating foul pulp-canals with soreness at end of root:

Menthol pip. crystal,
Choral hydrate, equal parts.

It is somewhat antiseptic, is soothing, agreeable to taste and smell.

He says also that chloral hydrate is a solvent for camphor, which makes a solution of value to dentists.

Formic Acid and Decay.

Dr. Dunn, Senior of Florence, uses formic acid for the softening of decay. The acid is applied on a piece of cotton to the cavity, like any other liquid, and after a few minutes, decay can be removed easily with a cup excavator. The formic acid seems to soften it considerably, and besides a characteristic odor, it seems to have no unpleasant or injurious effects upon the sound tooth substance.

To Remove Teeth from a Vulcanite Plate.

Let the buccal or labial surfaces of the teeth be exposed to the flame of a bunsen burner or spirit lamp for a moment but don't let the flame touch the vulcanite. They will while hot come off by a little pressure without emitting the unpleasant odor of burnt rubber.

D. D. A.

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Varnish for Starting Gold Fillings.

The practice of putting varnish in cavities as a starter for gold fillings, is quite common. The varnishes most used are damar dissolved in chloroform and sandarac in alcohol. A small quantity is placed in the cavity into which the first piece of gold is lightly pressed, the varnish dried and the filling continued. Care is to be taken that no varnish is allowed on the margins of the cavity.



